

# City Government

## New York and

### FEATURES:

#### Detroit's Electric Light Plant

A detailed account of the experience of the City of Detroit in lighting its own streets.

#### Improved Municipal Government

T. J. Fitz Gerald writes of the evil influence of partisanship in the government of municipalities.

#### Street Paving in Buffalo

Report of a staff correspondent on one of the best paved cities in this country.

#### Government of Paterson

A comprehensive review of its various departments, with portraits of city officials.

#### Department Statistics

Figures showing the condition, expense, salary schedules and equipments of many fire departments.

#### Paving Prices and Conditions

An article showing the quality and cost of various paving materials.

#### Toronto's Street Cleaning

What the Canadian city has accomplished by controlling its traffic.

#### Municipal Revenue in Canada

How European cities obtain revenue by making money from the use of public spaces.

#### Mayor Strong's Administration

An outline of the improvements made in the Municipal Government of New York City.

AND POWER  
AND FIRE  
AND WATER  
AND STREETS



8 CITY HALL, PATERSON, N. J.

CARRERE & HASTINGS, ARCHITECTS.  
44 Broadway, N. Y.

City of St. Louis,

Mayor's Office.

St. Louis, Aug. 13, 1896.

City Government,

New York, N. Y.

Gentlemen:—

I have received your sample copy of "City Government."

I have not had time to examine it as much as it deserves, but the general make-up of the paper commends itself, not only to dwellers in cities, but to all patriotic Americans. The problem of city government is one of the most difficult the Republic has to handle. I have no doubt the good sense of our people will solve this problem and in the meantime judicious agitation will assist greatly.

Wishing you success in your new enterprise, I am,

Very truly yours,

C. P. WALBRIDGE,

Mayor.

# CITY GOVERNMENT.

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## MAYOR STRONG'S ADMINISTRATION.

When the tax-payers and good citizens of New York elected their present mayor, William L. Strong, they built better than they had planned. From the ruins of a lawless, unhealthy, dirty and plundered city, they built a municipality as near the ideal as it is possible to get at this time. In the fall of 1894, when Mayor Strong was elected, the people of New York were awake to the

duties of good citizenship. They had been aroused by disclosures of the corrupt practices of the Tammany politicians then in control of the municipality. They wanted a change that would bring honesty, at least, into the administration of the business of their municipal corporation. This change they demanded by their ballots when they elected Mr. Strong to the mayoralty. It is not false to assert that very few of the good citizens whose votes placed the present mayor in office expected an administration that would give to New York a vast improvement in every branch of its government. Neither is it false to assert that, within a little

more than a year and a half, the condition of every department of the municipality has been improved.

A corrupt and law-breaking police force has been transformed into one of the most efficient and best disciplined departments in this country; a well-organized and capable fire department has been strengthened by the wise expenditure of funds which would have been diverted to other channels under the old regime; filthy, unsightly streets have been kept in a clean and healthy condition, despite the claim of former officials that this

was an impossibility; the public health has been guarded by improved methods; measures have been taken to secure an adequate supply of pure water; an incapable court of police judges has been replaced by a court of city magistrates who are members of the bar; public improvements have been made with a careful eye to securing the most enduring and best of everything at proper cost, and not with the purpose of giving officials and contractors a chance to plunder the city jointly; it

has been made possible for tax-payers to transact business in public offices, and to consult official records without submitting to extortion; the department of docks has been operated with large cash profit to the city, while in former years its expenditures exceeded its income; the standard of the public schools has been raised and the free educational facilities have been increased; the departments of charities and correction have been given increased appropriations to secure improvements necessary for the proper care of the city's charges; the city's property has been put in repair and its value has consequently been preserved or

increased; public parks have been improved and increased in number.

All this has been accomplished by Mayor Strong and his appointees—the commissioners of the various departments. It is the result of the conscientious efforts of honest, able business men, who have made personal sacrifices on the altar of good government. Thoughtful people will always expect an efficient administration from a mayor who, in his annual message, writes like this:



I am in receipt of the first number of CITY GOVERNMENT, a monthly magazine devoted to the practical affairs of municipalities. Municipal government, especially in our larger, crowded localities, is the most serious test of self government under our representative system. To provoke discussion and exchange of views on this subject is desirable, and should be beneficial.—W. L. STRONG, Mayor of New York.



"The city is certainly entitled to employ the best grade of talent for each position that can be obtained for the salary paid therefor, and the only proper means of making such selections, outside of certain exceptions in the nature of confidential service, is through the medium of competitive examinations. If party service shall be urged as a reason for political preferment, it can only be logically done upon the theory that such service brings about a greater familiarity with municipal government. If this be so, there can then be no objection to submitting to a competitive examination in which those who have not participated in party service must be upon an inequality, and those who have so served must either from such service be best qualified to pass the examinations, or else acknowledge the weakness of their argument for preferment on those grounds."

That is an extract from Mayor Strong's last message, and it is the keynote to his success.

#### TO KEEP THE STREETS CLEAN.

The commissioners of the District of Columbia, at their meeting held last week, made an order directing the property clerk to procure thirty boxes, to be placed at convenient points on the principal thoroughfares, for the reception of waste, such as fruit peelings, papers, cigar butts, etc., which the pedestrians are accustomed to throw upon the streets.

The boxes are to be manufactured of galvanized iron, and are to be 24 inches in height, and to measure 10 by 14 inches in length and width. They will be attached to posts at places to be designated by the superintendent of street and alley cleaning. The boxes will be lettered, that pedestrians may know their object.

The intention of the commissioners is that the streets and avenues in "the Paris of America" shall be kept clean, and free from anything which might offend the eye.

#### MORE TROLLEYS FOR PITTSBURG.

Seven bills granting street railway companies the use of additional streets were passed by Pittsburg councils on Aug. 10. Mr. Stengel, of the common council, bitterly opposed the adoption of the bills, but to no avail. He read an extract showing that the Suburban Traction Company had offered to pay the city of Baltimore \$20,000 for a franchise, and agreed to pay 9% of its gross receipts in addition. But Pittsburg gets nothing. It gives the tractions the most valuable streets and the tractions pay nothing for them. Mr. Stengel then read from the minutes of an annual meeting of the National Association of Electricians a portion of a speech delivered by Superintendent Morris Mead, of the Bureau of Electricity, in which he urged electricians in cities to use all their influence against legislation for single over-head trolley systems because of the danger of electrolysis. This destroyed underground pipes, and the water supply of such cities is constantly menaced.

W. A. Magee denied that traction companies in Pittsburg paid nothing for their rights. He declared that the paving they are required to do is equal to what some cities get and is more than is secured from the companies in many cities. As to the electrolysis, he said the companies were rapidly arriving at a point where they would be able to effectually stop that trouble.

#### AN OLD GAME OF CORRUPTION.

Away out in San Francisco the old New York and Chicago method of robbing the taxpayers is being followed by some of the city officials. Supplies for nearly all of the departments are purchased at prices from 25 to more than 100 per cent. higher than those paid by individual purchasers in retail stores. Here is a statement showing the prices paid by the city for drugs used at the hospital in comparison with the prices paid by ordinary retail purchasers:

	Price paid by City.	Regular Retail Price.
Tincture opium, per pt.....	\$2.00	\$1.25
Absorbent cotton, per lb.....	65	50
Whiskey, per gal.....	4.00	2.50
Brown mixture, per pt.....	1.28	60
Glycerine, per gal.....	\$3.25 to 4.35	1.80
Chloral hydrate, per lb.....	2.00	90
Liniment saponis, per qt.....	2.00	1.20
Liniment chloroform, per qt.....	3.00	2.00
Simple syrup, per lb.....	1.95	25
Hydrochlorate cocaine, per oz.....	7.25	6.00
Iodoform, per lb.....	6.85	5.00
Raw linseed oil, per gal.....	1.75	75

This is merely an illustration. The same state of affairs exists in other departments, and the San Francisco taxpayers are being robbed right and left. This method of thievery through a collusion of officials, merchants and contractors, is an old game, and brings into our vision the ghost of the immortal Tweed.

San Francisco is not the only city now suffering from this sort of municipal corruption.

#### VERY RAPID TRANSIT PROPOSED.

The Twin City Rapid Transit Company, operating in St. Paul and Minneapolis, is desirous of establishing a through passenger and express electric line between the two cities, and over its present interurban route, a distance of ten miles. The company has asked for a franchise and the question is now pending in the St. Paul common council. The interurban line is operated on University avenue, the main thoroughfare between the twins, and a street 100 feet in width. The company proposes, in case it is granted these additional privileges, to lay two new tracks on the avenue, making four in all, and to operate the express electric cars on the inside tracks. These four tracks would occupy a strip of the avenue about 36 feet in width, leaving 32 feet at either side for walks and roadways.

At present it takes 50 minutes to make the trip between the two cities, but with the express service, making but one stop at Midway, this time would be reduced to 35 minutes. The interurban fare is 10 cents, with transfer privileges at either end, but with the express service this would be increased to 15 cents, without transfer privileges. The local service, as it exists, would also remain in effect. The company proposes to equip the line with both express and passenger cars of the latest design and of great speed. It is expected there will be strong opposition to the common council granting the franchise. It is urged by the opposition that this would virtually be a conversion of the public use of this main thoroughfare to the city railway company.



## DETROIT'S ELECTRIC LIGHT PLANT.

Within a period of less than fifteen years after the introduction of electricity as a method of street lighting, Detroit now finds itself proud of its own municipal lighting plant, the acme of perfection in point of service and a joy to the taxpayers as far as the annual expense goes.

Like the introduction of electricity as a motive power for street-car service, the introduction of electricity for lighting purposes in Detroit met with considerable opposition. It was not until Aug. 1, 1883, that the electric light in this respect became a fact. At that time a brief section of the downtown district was set apart and twenty-two electric lights made to cast their brilliant light upon the streets at night. Within the year this number was increased to twenty-four lamps, displacing a total of 116 gas lamps.

The experiment, for such most of the citizens called it, was a satisfactory one, and the year following a contract for supplanting all gas lamps with electricity was made with the Brush Electric Light Company, which continued to light the streets until 1890, when the Detroit Electric Light & Power Company underbid and secured the much-coveted contract. This latter company continued to light the streets until totally displaced about nine months ago by the city plant. The Detroit Electric Light & Power Company had a three years' contract which expired June 30, 1893, but the public lighting commission continued arrangements with the private concern, the city plant not being a matter of fact at that time.

The lighting of the streets by a private corporation did not prove highly satisfactory to the citizens. It was extremely expensive and gradually the agitation for a municipal plant grew in proportion until it became irresistible.

Mayor Hazen S. Pingree had been elected by the Republicans upon a wave of reform and in his first message to the common council, the message of 1890, he thus wrote of the street lighting:

"Lighting the streets is as much a public matter as street paving and cleaning, sewer building, maintaining and improving the parks and boulevards, supplying water and providing against fire. I think the time has come when the city should assume control of public lighting and own and operate its own plant for that purpose, thereby escaping the caprices or combinations of private corporations."

A year later the agitation was mildly renewed, while in the message of 1892, his honor drew comparisons with the prices paid by other cities, and the service, which had become notoriously bad, was the subject of much criticism by citizens and in the public prints. A year later the municipal plant was again urged as the best solution of the difficulties and in the legislature of that year, 1893, a bill was passed giving the city the power to construct its own plant. A provision of the act was that at the April election a vote should be taken by the electors. This was almost unanimous in favor of the city plant. Later in the same month bonds to the amount of \$600,000 were sold, at a premium of \$27,540, to defray the cost of constructing the plant.

Of the construction of the plant and its methods of operation further will be written later on. For the present it is sufficient that the construction did begin and in course of time the plant was completed. Within the half-

mile circle of the underground system 189 arc lamps were started going by the commission, and from time to time this number was increased until, beginning Oct. 1, 1895, the entire city was lighted by the municipal plant, 1,470 lamps being used, and this number has now been increased to 1,492.

The following table shows the cost of operating under the contract figure. It gives the number of lamps, the total amount paid yearly and the cost per lamp:

YEAR ENDING JUNE 30.	NUMBER OF LAMPS.	AMOUNT PAID.	COST PER LAMP.
1884	24	\$3,649.53	\$152.07
1885	300	71,982.00	239.94
1886	382	91,570.97	239.71
1887	565	115,490.26	204.41
1888	608	117,370.18	193.04
1889	702	128,062.78	182.42
1890	719	137,937.30	191.84
1891	1,031	133,716.55	129.69
1892	1,168	152,282.70	130.38
1893	1,279	164,830.91	128.87
1894	1,279	169,360.35	132.41

In 1895 a portion of the city, during April, May and June, was lighted by the municipal plant, the Detroit Electric Light & Power Company being paid \$153,004.36 for the rest of the city at a uniform rate of \$11.15 per lamp per month. The same rate was continued for July, August and September of the new fiscal year, when, beginning Oct. 1, the city plant was in full operation.

Ending June 30 of the present year, the plant was in operation nine months, lighting the streets and nearly all the municipal buildings, including police and fire stations. During this time the expenditures of the commission amounted to \$82,803.36, divided as follows:

Coal, at \$2.19 per ton.....	\$12,208.09
Labor and Management.....	55,821.63
Carbons.....	5,820.49
Oil and Rags.....	1,149.76
Cleaning.....	1,970.10
Globes and Nets.....	476.40
General Supplies.....	4,472.12
Printing and Stationary.....	237.01
Freight and Transportation.....	126.06
Incandescent Lamps.....	327.70
Surgeon and Hospital.....	194.00

\$82,803.36

This cost included, of course, the supply of 2,505 incandescent lamps for purposes already stated, at a cost of \$6,606.35 for the nine months. This leaves \$76,197.01 as the cost for the arc lamps, the average number burning being 1,483. It is figured that the interest on the bonds was \$16.18 per lamp per year, so that the cost to the taxpayers was \$84.70 per lamp per year as against \$133.80 per lamp per year under the last contract price. Upon a basis of the 1,483 lights that the city is now using this would be a saving of \$72,815.30 per year. Of course, the plant is perfectly new and the depreciation by use has not yet become a figure in consideration, but against this is the fact that the months included in this test term are those requiring longer nightly lighting service.

As under the contract system, the police are required to report daily the number of lights out nightly, and the length of time out. The report for the nine months is as follows:

	No. Lamps Out.	Hours Out.	Per Cent. Lamps Out.	Per Cent. Hours Out.
October.....	152	1,040	0.335	0.201
November.....	95	774	0.266	0.137
December.....	138	940	0.300	0.154
January.....	47	372	0.116	0.062
February.....	42	301	0.098	0.059
March.....	28	235	0.061	0.048
April.....	84	350	0.179	0.088
May.....	63	283	0.138	0.080
June.....	25	137	0.056	0.042

This is a vastly more regular service than under the contract system and will stand comparison with the service in any city.

The plant is located upon eleven lots on Atwater street, between Bates and Randolph streets, containing 64,175 square feet of ground. It reaches to and includes the river front. The purchase price was \$63,125. The buildings are substantial and convenient. They cost \$72,247.78 when completed. The steam plant has seven double-deck tubular boilers, each with a heating surface of 3,000 square feet. The water enters through a Hoppe's purifier and the furnaces are of the Hawley down-draft type. The engines are five in number, of three cylinders of 11½, 18 and 29 inches in diameter, 18-inch stroke and run at 200 revolutions per minute. There are also two combined condensers and feed pumps and a fire pump, all of the Worthington type.

The electric plant is of two sections, the larger for street lighting and the smaller for incandescent lighting of the public buildings within the half-mile circle. For the former eighteen 50-K.-W. constant current dynamos for series arc lighting and 1,500 series arc lamps were purchased, and for the incandescent plant three 55-K.-W. alternating current dynamos of the two-phase were selected as being what the municipal lighting plant needed. Within the half-mile circle of the city hall all the wires are under ground, and in the interest of economy, wherever the poles of other commissions were convenient, joint use was decided upon by the fire, police and electric light commissions. This, of course, materially lessened the cost of pole line construction. The following table gives the cost of the plant in construction up to the first of July, the beginning of the new fiscal year:

Land for Central Station.....	\$63,125 00
Erection of buildings.....	66,661 25
Services of architects.....	3,453 80
Inspection Board of Public Works.....	1,483 00
Dock building.....	3,746 70
Boiler room floor.....	649 73
Paving and sodding grounds.....	1,393 60
Sidewalks.....	220 69
Water intake system.....	2,608 21
Central Station fixtures.....	23,865 04
Pole line construction.....	107,779 81
Conduit construction and cables.....	87,602 53
Railway track.....	9,665 60
Towers.....	85,099 13
Engineering.....	16,585 25
Lamp posts.....	6,956 82
Steam plant.....	82,152 33
Arc lamps.....	29,628 62
Electric Plant.....	40,842 53
Machine shop.....	5,378 19
Miscellaneous.....	2,349 54
	<hr/> \$641,247 27
Less sale of material, rent of lines and labor for other boards, included above.....	11,105 55
Net cost of plant to date.....	<hr/> \$630,141 72

It might be added that the commission has established a most complete workshop in connection with the plant, so that nearly all repairs necessary are done within the building and at the minimum of cost.

Does the municipal lighting plant pay? Alexander Dow, who resigned his position as city electrician to go with the Edison company, declared some time before his resignation went in that a municipality couldn't do its own lighting as cheaply as it could be done under contract. Perhaps this is so, but it is certain that Detroit is finding it cheaper to do its own lighting than it ever did to have it done by a corporate concern.

#### THE HOMES AND THE CITY FRANCHISES.

Women, as a usual thing, do not pay much attention to the granting of a franchise, or to the forming of trusts, because they too rarely realize how close to the home the privileges of a franchise may come. The housekeepers of Brooklyn have just had a lesson in this respect. Two years ago there existed in Brooklyn seven independent gas companies. Through competition the price of gas went down to ninety cents a thousand. It was possible then, if a housekeeper did not like the quality of the gas delivered, or was dissatisfied with the bills rendered, to change to some other gas company. But now the seven gas companies are incorporated under the title of the Brooklyn Union Gas Company, and gas has risen to \$1.25 per thousand, with no possible redress for poor gas or excessive bills. If the housekeeper uses gas in Brooklyn, she must take it from the Union Gas Company. This company represents a capital of \$15,000,000. It is a well-known fact that a large part of this capital would come under the head of watered stock, but interest must be paid on \$15,000,000 by the consumers of gas in Brooklyn, whether that interest represents invested capital in fact, or whether it represents so much paper. There is talk of an attempt to destroy this monopoly. Probably the sudden rise in the price of gas in Brooklyn will do more to change the sentiment of the people and hasten the day when gas, like water, will be delivered by the city, than any amount of argument or printed matter could have accomplished.—The Outlook.

#### THE WATER QUESTION IN PARIS.

The water question is said to have assumed an unexpected and serious aspect in Paris. It is claimed that the reservoirs which supply the wants of the French capital are far too small for the purpose. At the best of times they only hold water enough for a fortnight, but it is dangerous, or at least imprudent, to store up even this quantity during really warm weather. One of the principal officials now declares that unless three more reservoirs are created at once there will not be enough water in 1900 for the ordinary needs of the Parisian population, to say nothing of those of the visitors who are expected to come for the exposition. Two new sources of supply must be found, he says, to obviate all danger of drought. To complete the system he estimates that 100,000,000 francs will be necessary. In a scheme of this magnitude there would be fine pickings for somebody, and there is good ground for the suspicion that the urgency is not so great as it is represented to be.



## TORONTO'S STREET RAILWAY.

It is in the city of Toronto, Canada, where municipal ownership of street railways is not merely an experiment but a permanent factor in the city's prosperity, that one can realize the possibilities of intramural transit where the means of travel are controlled by the people who ride.

It is something of a novelty for New Yorkers or Chicagoans to ride on a street railway system where there are invariably enough cars to accommodate all passengers without crowding, even in the rush hours of the day; where the maximum fare is four cents, and at certain hours of the day three cents; where winter cars are always heated and where summer cars are protected by guard railings; where free transfers are given on all connecting lines in any direction, so that a passenger, if so disposed, can ride all day for a single fare, and where the street pavements adjoining the tracks are invariably kept clean. All these benefits, and more, too, are enjoyed by the street-car patrons of Toronto. They have been secured through municipal ownership, although the city does not operate the lines, but leases them to a private corporation.

The contract between the latter and the city reserves to the city the absolute power to control all the important details of management, so that the company which operates the line is practically the mere executive agent of the municipality, subject at all times to the control of the city authorities. In spite of these restrictions the company pays a good dividend on abundantly watered stock, and would not abrogate its contract if it could. The people who ride are the real stockholders, so far as the franchise and tracks are concerned, and a large proportion of the earnings help to swell the city's revenues. As a consequence other taxes are reduced and every street-car patron has a more or less personal interest in the correct management of the system. The one defect in Toronto's street car system is that the universal overhead trolley is employed, but it is safe to say that this will be one of the first cities to bury the wires underground in the near future. Another reform which the citizens are preparing to urge is the reduction of fares to three cents at all hours of the day.

Perhaps the most instructive example of the feasibility of three-cent fares can be found in Toronto. When the present contract between the city and company was made in 1891, it was stipulated that fares should be five cents for one and twenty-five cents for six. Workingmen's tickets, good night and morning, were to be sold at twenty-five cents for eight, and school children's tickets ten for a quarter. The result has proved that during the hours between 5:30 and 8 a. m. and 5 and 6:30 p. m., when practically a three-cent fare is in force, the traffic has shown steady gains year by year. The ratio of traffic gains during those hours is much larger than during the rest of the day, although the highest fare at any time is by the purchase of tickets at practically four cents. The street-car company would not put back all fares to the maximum rate, even if it had the power. The lesser rate during the morning and evening hours has stimulated travel to an extent that justifies the enlargement rather than curtailment of those hours. The same authority is re-

sponsible for the statement that the company will soon voluntarily propose a universal three-cent fare at all hours of the day. The bicycle craze has struck Toronto with a force that means the loss of \$300 or \$400 a day to the street-car company, and it is believed that the only way to meet the new conditions is by a further reduction in fares. At all events the next time the city has an opportunity to amend the contract regarding fares it will force a universal three-cent fare without regard to the company's willingness. This is the promise of the most influential leaders in civic affairs.

Besides giving the citizens cheap fares, municipal ownership of her entire street railway lines has given Toronto a steady annual income which goes far toward paying the cost of running the city government. The present net revenue from the street-car system is about \$140,000 per year.

The present revenue of about \$140,000 per year is collected from the Toronto Street-Car Company in two ways. First, there is a rental of \$800 per mile on about eighty miles of tracks, or \$64,000. Second, the company pays a tax of 7½% on its gross receipts, which at present are about \$1,000,000 per year, and increasing. The tax on receipts, therefore, yields \$75,000 per year, or a total revenue to the city approximating \$140,000. The contract with the company provides that when the gross receipts exceed \$1,000,000 the city's percentage shall be increased to 10% up to \$1,500,000. Between \$1,500,000 and \$2,000,000 the city is to receive 12%; between \$2,000,000 to \$3,000,000, 15%, and on all over \$3,000,000, 20%. It will thus be seen that the city is to share in an increasing ratio in the company's future prosperity, furnishing a mutual inducement for the enlargement and improvement of the service. The contract further provides that the company shall at all times be subject to the control of the city engineer in respect to the number of cars to be run, the speed, the improvements to be introduced, repair of streets, removal of snow, the keeping of accounts and other important details. The contract further says that the employees of the company shall not be required to work more than ten hours a day, nor more than sixty hours a week, nor more than six days in the week.

The operating cost per car-mile in Toronto in 1894 was only 8.33 cents, while the receipts were 15½ cents per car-mile. Nearly half the receipts were therefore profit. If the traffic had been proportionately as great as in Chicago or other large cities—Toronto only carried about four passengers to the car-mile, as against many times that figure in Chicago—the ratio of operating cost to receipts would have been much less. Toronto is a striking object lesson as to the feasibility of three-cent fares. With a comparatively light traffic she has proved that in the management of a well-equipped street-car system everything over two cents is absolute profit, and that it is possible to reduce the operating cost to an even less figure. Not only does the city derive a large revenue from the system, but the company itself, with its stock watered up to \$6,000,000, pays a fair annual dividend. All this, it is to be observed, is on a basis of an average fare of less than four cents. While the nominal single fare in Toronto is five cents, every one buys tickets, which are twenty-five for \$1, or six for twenty-five cents, and



eight for a quarter during the special hours mentioned. As if this evidence were not sufficiently conclusive as to the profits of street railway management, Toronto's experience goes to prove that if the city operated its own lines instead of leasing them to a private company, the annual revenue therefrom would be twice as great as from the present leasing methods. The figures to sustain this assertion are found in the reports of the management during a period of six months in 1891, immediately following the city's purchase, from the old company, of the entire plant at an arbitrated value. For the first six months after purchase the city operated the lines at a net profit of about \$25,000 per month, or \$300,000 per year. Then pressure was brought to bear on the city government and the plant was leased to a private corporation, with the restrictions mentioned. The result has been that, while the present annual revenue from the street-car system is proportionately greater than almost any other city in America enjoys, it is still less than one-half that which was demonstrated to be feasible under joint municipal ownership and operation. It is noteworthy, too, that the adoption of the most generous system of transfers possible and the liberal reduction of fares from the old standard were immediately followed by stimulated travel and constantly increasing gross receipts.

Toronto's power to do with her street railways what she pleases virtually began with the insertion of a clause in the original franchise granted the old company giving the city the right to purchase all the property of the company at the end of the franchise at an arbitrated value. This contract was made with the Toronto Street Railway Company in 1861, and expired by limitation on the 26th of March, 1891. No more striking instance has been recorded of the wisdom of such purchasing clauses in original franchises, nor has there ever been a more signal example of the triumph of civic rights over corporate greed. The company, of course, set up all kinds of fictitious claims and resisted the arbitration proceedings in every way possible. A long and bitter controversy in the courts resulted in a victory for the city at every point. Nothing was said in the original contract about money being paid for the franchise, and the city for thirty years only received a nominal sum for the repair of roadways, etc. In its early days the company was supposed to be poor, but toward the close of the franchise it waxed enormously rich. The methods of the city authorities in finding out the actual profits of the company and in preparing to secure some adequate return for the privileges enjoyed are instructive. The city first secured an act from the provincial legislature confirming the arbitration clause in the contract and giving the municipality power to take possession of the company's plant. A host of private detectives were then set at work to count the actual number of daily passengers carried. It was found beyond a doubt that the company was literally coining money, and that its true revenues were far in excess of those given to the public. When evidence was taken in the arbitration proceedings it was proved that the total actual investment in the original plant and subsequent capital invested was less than \$40,000. When the company toward the close of the franchise was asked to name its figure as to the value of the plant and property it

named \$5,500,000. The city's experts said that the total value was \$255,288. It was also proved that the old directors had received over \$1,000,000 within ten years in excess of the amounts shown by the books of the company. With these wide discrepancies to start with, the fight soon narrowed down to one of actual values, and the city was awarded the property and took possession. Then followed six months of experimental operation by the municipality, and later a new contract on the terms already mentioned.

#### TRAMWAY CONTROL IN ENGLAND.

The street-car service of Yorkshire and Lancashire offers many surprises and anomalies for American eyes, writes an English correspondent in the New York "Tribune." The lack of enterprise shown in the employment of either horses or steam-tenders in the place of cables or electricity is conspicuous. The surplus accommodation for the public is equally noticeable, the cars being large and amply supplied with seats. No passenger ever stands in an English street-car. The conductor is liable to arrest if such an outrage occurs. Then there is the remarkable cheapness of the fares. A mile for a half-penny is the rule, and for a penny a passenger may often go three or four miles.

The most striking contrast between the English and American systems lies in the relations of the municipal government to these enterprises. In America the streets and highways are surrendered (often gratuitously and infrequently with proper compensation) to private corporations, which for the sake of paying large dividends to stockholders overwork and underpay their operatives, withhold from the public adequate accommodation and seldom reduce fares unless they are compelled by legislation to do so. In English and Scotch cities, with rare exceptions, the municipal government retains control over the roadway, constructs and owns the tramway, and either operates it as a branch of the town service or leases it to the highest bidder with guarantees of remunerative rentals, low fares, and satisfactory accommodation for the public.

In Huddersfield municipal operation of tramways has been exposed to many vicissitudes of fortune. The corporation was authorized in 1880 by act of parliament to lay tracks and to advertise for proposals for working the lines. The railways were constructed, but no satisfactory bids were received for operating them. The corporation consequently was compelled in January, 1883, to employ engineers and conductors, and to enter into the business of railway management. The grades were very steep, and it was necessary to substitute steam for horse power. The fares were low, and the system at once became popular, but the railways had not been operated longer than six months before a frightful accident occurred from the overturning of a car, over which the engineer had lost control. This accident cost the corporation over \$40,000 in compensation for lives lost and injuries sustained, and temporarily created much prejudice against steam tramways. Eight years afterward another accident occurred from the explosion of a boiler on a tramway engine, and this cost the corporation \$10,000

in damages. The tracks had been laid originally for horse-cars, and when steam was introduced the cost of keeping them in repair was materially increased from the use of heavier rolling stock, so that the reconstruction of the lines became necessary.

In consequence of these costly accidents and the heavy charges for repairs the lines have not been remunerative enterprises, although the passenger traffic has been very large for a town of 100,000 population. The deficiencies in running expenses, with the interest charges and sinking fund contributions added, have been met from the rates, or local taxation, the burden ranging from one-ninth of a penny to five pence in the pound. After all these drawbacks the bills for damages have been paid and the lines reconstructed, and the tramways are now virtually self-sustaining under municipal management.

From information supplied by the courteous town clerk, of Huddersfield, I find that \$702,500 has been borrowed by the corporation, for which there is an accumulated sinking fund of \$31,815. The expenditures for tracks, engines and cars have been \$679,435. About twenty miles of street railway are in operation. The receipts and expenditures now meet on working terms, although the taxpayers during fourteen years have been called upon to provide about \$206,000 for deficiencies, one-sixth of which was represented by sinking fund contributions.

These figures on their face seem to carry condemnation of municipal management as an unprofitable financial undertaking; but both the corporation and the public seem to be satisfied with the situation. As the town clerk explains the matter, the municipal council does not wish to show a more favorable balance sheet. Under the act of parliament by which the corporation acquired the right to lay and own the tracks, it is under obligation to advertise for proposals for the letting of the lines; and so long as the statute remains without amendment the council, in order to retain in its own hands the management of the tramways, will not allow the business to become profitable. Whenever there seems to be a large margin for surplus earnings extensions of the lines are planned and the expenditures increased. This policy is adopted deliberately in order to discourage bidding for leases; and at the same time fares are maintained at abnormally low rates. The council seems to be convinced that municipal operation, which was forced upon the corporation when it was impracticable to obtain responsible bidders, promotes the interest of the town, and must not be abandoned through technicalities of the act, which will some day be removed. Certainly Huddersfield has cheap, if not rapid, transit, and the extension of the system by the construction of unremunerative branches has tended to serve the ends of public convenience and the building up of remote sections of the town.

If Huddersfield presents the anomaly of street-car management which aims to keep down earnings by unprofitable extensions of the service and by low fares, the neighboring city of Leeds offers the equally amazing spectacle of corporation control of tramways for the sake of redressing the grievances of engineers, drivers and conductors. While the street-car lines of that town were managed by private companies the men employed were

overworked and underpaid, and the public sympathized with them. About a year ago, in consequence of the public agitation of the wrongs of the operating force, the town council purchased the property of the street-car lines—horses, engines, cars, and stations—for \$650,000, and brought them under direct municipal management. The wages of the operatives were advanced almost at once and their working hours were shortened. Fares were reduced, the rolling stock was improved and the traffic enormously increased.

The financial results of the first year of municipal management are generally accepted in the town as satisfactory, although it is not altogether clear whether or not there is a balance on the right side, when all the charges for interest and sinking fund are entered. The lines under municipal management are now practically self-sustaining in any event, and there has been a marked improvement in the service. The recent experience of Glasgow has demonstrated that the street-car business can be profitably as well as efficiently conducted on a municipal basis. It is not probable that either Leeds or Huddersfield will abandon the experiment.

#### THREE-CENT FARES KNOCKED OUT.

The death-knell of three-cent fares in Detroit has been sounded and that after a brief life of but little over a year. A month ago, Albert Pack, president of the Detroit Railway Company; H. A. Everett, of the same concern, and representatives of the Detroit Citizens' Street Railway Company, met in consultation in New York with R. T. Wilson, the virtual owner of the Citizens' company. It was then announced in the Detroit public prints that this meeting was for the purpose of bringing about the long-expected consolidation of the two roads. Admissions of gentlemen connected with these roads have since confirmed the truth of the reports and within sixty days Albert Pack, of the Detroit railway, will be president of the consolidation; J. C. Hutchins will, as agent of R. T. Wilson, be vice-president and treasurer; Ford Sat Starling will be auditor, and A. B. du Pont superintendent. The financial departments of the two roads will not, until there is one general rate of fare, be united.

Following this consolidation, the Citizens' company has renounced its voluntary eight-for-a-quarter tickets, but has done much better for the public than it might have done. Instead of going to straight five-cent fares it has issued six-for-a-quarter tickets with transfers on all its lines. Officers of the companies expect that within two years one general franchise will be granted upon a basis of six tickets for a quarter with universal transfers, and with a view of being in a position to grant these universal transfers the Fort Wayne & Belle Isle Railway will be, if possible, forced to sell out to the big organization. In the meantime the Fort Wayne company is experimenting with an eight-for-a-quarter ordinance offered it, but it is certain to be rejected. Even if it is not, all its lines are paralleled, so that it seems certain it can be forced to sell to the big company a majority of stock.

The total net debt on Pittsburg, according to a report just made by Controller Henry I. Gourley, is \$9,599,705.13.



## IMPROVED MUNICIPAL GOVERNMENT.

BY T. J. FITZGERALD.

Municipal reform is the vital question of the day. State and National politics have been relegated to the historian to make way for municipal leagues and reform clubs.

The increase of the urban population necessitates, in fact demands, that better municipal government is essential to the life of the nation. In the days of Jefferson and the signing of the Declaration of Independence but 3 per cent. of the population lived in cities. In the year 1800 the largest city in the United States had a population of about 70,000, and there were only six cities with a population exceeding 8,000.

At that time about 4 per cent. of the population resided in those six cities. In the year 1860 this class of cities had increased to 141, and contained 16 per cent. of the population; in 1890 they had increased to 437 and 29 per cent. of the people lived in them. To-day about one-third of the people of the United States live in cities and the four largest cities contain about 10 per cent. of the entire population. According to the last census, 61 per cent. of the state of New York now live in cities containing 8,000 and upwards. This being the case it is but natural that the better government of the cities should be an important factor; if these cities are well governed a large share of our people will be well governed.

A few years ago James Bryce, an Englishman, wrote an elaborate treatise on "The American Commonwealth." He says "Two tests of practical efficiency may be applied to the government of a city; what does it provide for the people, and what does it cost the people? The latter test of efficiency has great influence with the voter, especially if he is a taxpayer, on election day. If the tax-rate is low the average citizen will put up with almost anything. When the tax-rate rises the taxpayer 'rises in his might to defeat his political oppressors,' perhaps forgetful of what they have provided for the city. I once heard an alderman of New York city, who has given the subject of municipal government the study of his life, express himself very forcibly on this point before the People's Municipal League of that city. 'Nothing,' said he, 'arouses a voter so quickly as touching his pocket-nerve.' The American people will stand almost anything except high taxes. It is a sad commentary on the alleged intelligence of an American elector to see him vote annually on national or state party lines for a ring that furnishes him daily with evidence of its incompetency, extravagance and dishonesty. If the tax-rate is low, and the citizen is really prosperous in his occupation, he will overlook filthy and badly paved streets, defective sewerage, a scanty and polluted water supply, inefficient public school accommodation for his neighbor's children, a venal police force, controlled by the boss of the city; a bribed city council voting away valuable franchises for a nominal sum; corrupt police magistrates administering justice for the benefit of the ring, the payment of double the market price for supplies in the city departments, and a score of other abuses. A mistaken party zeal blinds the ordinary voter to these alarming conditions, which stand as a growing menace to popular government. Year after year the well-intended partisan votes—if he votes at all—

the ticket of his fathers regardless of the change of conditions and the obligations of civic duties, as long as his taxes are apparently not increased."

Good or bad city government is not a partisan matter. Republican Pittsburg is as badly governed as democratic Chicago with a republican mayor; the gas ring of republican Philadelphia was as notorious as the Tweed ring of democratic New York; a change of power from one political party to another is not the real remedy for municipal evils; the chief remedy lies in the improvement of the men who execute the laws. The best citizens should be selected for municipal offices, regardless of their birth, their religion, their wealth, and irrespective of their views on national affairs.

The city of Washington, D. C., is undoubtedly the best governed city in the United States. Its clean and spacious streets, its beautiful parks and many of them, its fine public buildings, make it the most beautiful city in the world, perhaps the gay French capital the sole exception. The District of Columbia is now, by act of congress, a municipal corporation. It is governed by three commissioners, two of whom must be citizens of the district, the third selected by the secretary of war and an officer of the corps of the engineers of the army. While a majority of the board controls all the departments of the city, the public works are entirely under the supervision of the engineer commissioner. No laws or ordinances are enacted by the commissioners, all legislation is made by congress. In fact, the government of the city is practically controlled by the committees of the house and the senate. This is the fourth experiment made by congress for the better government of that city. Prior to the creation of the commission there were a governor, appointed by the President and with the consent of the senate, and two branches of the city legislature elected by the people. This plan did not last long, but, perhaps it was due to the extravagance of the administration, rather than its inefficiency. It is known as the "Boss Shepherd regime."

I met Col. James Barret, the last governor or mayor of the District, at the Arlington Hotel, a few evenings ago. In speaking of the Shepherd administration, he said: "They began a series of improvements and spent millions of dollars for wooden pavements which were out of repair before they were completed; the municipal debt was increased to an amount exceeding \$20,000,000; the credit of the city destroyed to an extent that its bonds sold at thirty cents on the dollar, when congress interfered and established the present form of government. However, it must be admitted, with fairness, that the grading of the streets and those beautiful parks are due to the Shepherd ring." After the new municipal government was created the use of asphalt for paving became general, and Washington is now probably the best paved city in the United States. The rate of taxation is low, about 1½ per cent. on the actual valuation of the property. The general government owns about half of the property in the District, and contributes annually an equal amount to that raised by taxation. The city ordinances and regulations are excellent, and are generally enforced.

The most practical reform in a misgoverned city is to elect an honest, intelligent citizen as mayor, provided, of course, he is vested with the power of appointment and



removal; one who has the courage to act according to his convictions; a good judge of human nature, and the fact that he has been successful in his private life is not at all objectionable. Mr. Chamberlain was a successful manufacturer of Birmingham, England. He served thrice as mayor with great success. Grover Cleveland is another illustration of what a competent, successful man can accomplish in municipal reform. He made such an excellent mayor for Buffalo that it paved the way to the White House.

It is a very fair definition of a mayor to say he is a chief magistrate of a city. Outside of the powers vested in him by law, he should minister to the happiness and the safety of the people, irrespective of politics, religion or birth; he should keep a watchful eye over the expenditures of the different departments, and while he should encourage public improvements for the health and comfort of the citizens, he should at the same time instill economy, vigilance and rigid honesty into every branch of municipal affairs.

The burgomaster (Burgermeister) of a German city—Berlin, for instance—is an expert in the art of municipal administration. Associated with him in the magisterial councils are experts in law, in finance, in education, in engineering, in sanitary science, in public charity, in forestry and park management, and in water and gas supplies. Although the analogy may seem a little crude, it will answer the purpose to compare the governmental structure of a German city with that of a railroad corporation. The board of directors chosen by the stockholders appoint a general superintendent, a manager, a general passenger agent, a general freight agent, a chief legal adviser, a chief engineer, a superintendent of motive power, etc. The shareholders represent the voters of Berlin, the board of directors the municipal council, the general superintendent the chief burgomaster, and the general officers at the heads of departments the magistrates. The choice of the burgomaster, however, is subject to the approval of the Emperor, who may veto without giving reason any one not in sympathy with him. The present head mayor or burgomaster of Berlin, Herr Zelle, is a liberal of pronounced views, and whose party is opposed to the Emperor. This did not interfere with his confirmation, as he is a gentleman of dignified and courteous manners, and an ideal personage for a mayor.

At present the mayors of American cities are generally elected by the people. This was not always the case.

It was not until the year 1834 that the mayor of the city of New York was elected by the people. In Philadelphia the mayor was chosen by the council as late as 1839. If I remember rightly, the charter creating the city of Boston provided for the election of mayor by popular vote, and allowed him to be a member of the city council. While I cannot say that I am in favor of the movement, yet if our city councils were empowered to elect the mayor either from their own members or from the community at large, perhaps the people would exercise more care in the choice of their councilmen.

Concerning the policy of paying high salaries or no salaries to the officers, a great deal can be said on both sides. The salaries of the heads of departments should be sufficient to induce competent men to seek such places. Retired merchants or lawyers could conduct departments

on business principles, and with the same success they achieved in their private affairs. Too often the men who govern our American cities are men who made a failure or who did not succeed in private life; not a few have been conspicuous as saloonkeepers or law-breakers.

#### PUBLIC WORKS MUDDLE AT ST. PAUL.

The city of St. Paul is at present indulging in the luxury of two departments of public works, one consisting of a board of four members and the other of a commissioner, recently installed under the act of the state legislature of 1895. The board of public works, acting under the present charter, has been an objectionable feature of the city government, in the opinion of many tax payers; largely on account of the expense of maintaining the same, each of the four commissioners receiving until recently a salary of \$2,500 a year; there being in addition a liberal allowance for clerk hire. At the last session of the legislature an act was passed for departments of public works and the making of public improvements in cities of over 100,000 inhabitants, the adoption of the same being left to the option of the larger cities. While general in its scope, the law was undoubtedly intended for the benefit of St. Paul.

In the last local election, when the republican party elected all but one nominee on its ticket, the adoption of this legislative act was one of the issues of the campaign. The council, in the early part of July, adopted the same by ordinance, and the mayor appointed John Copeland, an ex-councilman and an official of the Omaha Railway company, as commissioner of public works, at a salary of \$3,000 a year, the appointment to take effect August 1, 1896. On that morning the members of the old board found themselves locked out of the rooms formerly occupied by them, and shortly afterward the commissioner was installed in the board's office. The ejected board of public works sought accommodations in an adjoining court room, and has since been in session there, refusing to disband until the courts shall have decided upon the constitutionality of the act of the legislature, which decision will not be rendered until the October term of court. The board continues in daily session, the same as the commissioner, and allows estimates of contractors engaged on public improvements in order, it is claimed, to protect the interests of the said contractors in case the act creating the office of commissioner of public works is declared unconstitutional. The common council recognizes only the commissioner of public works.

Mayor's office,

Brooklyn, N. Y., Sept. 4, 1896.

Gentlemen:—

Permit me to commend the enterprise shown in the publication of "City Government," and to wish it success in the field it has chosen. There are so many serious problems in administering municipal affairs, that every effort in the direction of their solution should be heartily welcomed.

F. W. WURSTER,

Mayor of Brooklyn.

## PAVING PRICES AND CONDITIONS.

A close second in importance to the question of sewerage and water is paving. In spite of the fact that these United States have made tremendous strides toward a condition of real enlightenment in the matter of serviceable, beautiful and clean roadways, there is little known of the subject, even in cities where there has been some effort made to provide improved streets. In towns where there has been no paving done the ignorance of the people in the matter is alarming. However, the conditions are so essentially different from what they were a few years ago that, it must be conceded, at the present time there is a more general interest in roads and roadways than ever before, and this interest will not flag until the cities, large and small, of the United States, will be as well paved as any of those of Europe. We are so accustomed, as a people, to assuming that progress in this country leads the world that it is rather hurtful to one's pride to have to concede that they know how to manage these things better in some of the large cities in Europe. The cities of the United States have just begun to pay attention to roadways, while Berlin, for instance, among the cities of the old world, is beautifully and substantially paved. Possibly the state of affairs in the German capital is due to the fact that under a despotism public matters may be wisely administered, for results, but at the great expense of the taxpayer. Under popular government the taxpayer scans every item of cost, and perhaps too closely. The thing then to do is to educate the people as to what constitutes real economy, and it has been decided that the best investment any city can make, the questions of water and sewage being settled, is pavement.

The statistics of this country are woefully deficient in this very important matter. The people who lay paving are obliged by necessity to keep well abreast of the times. Most city officials, whose business it is, or should be, to keep informed on public affairs, know nothing of paving. This is demonstrated in the fact that precisely the same sort of pavement varies in price in various cities from the extreme of expense in one direction to the extreme in the other. It is true that local conditions—the cost of labor and other items—may enter largely into the question of cost, but when we find that vitrified brick paving is contracted for at \$1.50 in one city and \$2.50 in another city of equal size in another section of the country, and under practically the same contract conditions, it is evident that the officials in one of these towns have taken advantage of properly acquired and accurate knowledge while the others have groped in the dark.

The statistics of paving should be absolute, for there is nothing of the odor of antiquity about them; they are contemporaneous. They are also difficult to get at. For instance, the City of Brooklyn has a plan of letting contracts for paving in separate items, the foundation, surface and curbing being bid on as distinct items. The actual cost of the paving cannot therefore be analyzed, as in some cases the new pavement goes in on top of the stone pavement that has been in use, while in others it is put in on the sand. The first method is, of course, only pursued when the new paving is of asphalt—and that is generally the case, for asphalt has practically taken the place of all other material. It is beyond any question

the cheapest and most serviceable of all paving, except on streets where the traffic is exceptionally heavy, or where the local conditions are such that brick and stone are very low in price. Almost the only competitor the asphalt has is vitrified brick and it is quite safe to say that more than three-fourths of all the paving done this year, or last year, is asphalt. Perhaps the warmth of the bicyclist in advocating the asphalt has had something to do with this state of affairs, but certain it is that it is practically the one material that has to be reckoned with in most cities where there is paving to be done. The sharp competition that is going on among manufacturers of asphalt, and the people who use the material in their contracts, has reduced the price very materially, and in most cases has cut away the profits on work that is being done this season; which, by the way, will not be very extensive because of the difficulty encountered by people who have bonds to sell. Had the financial conditions not been disturbed there would have been more miles of streets paved this year than in any one year in the history of the country.

An instance of this difficulty is shown in Brooklyn, where bids were asked for on about fifteen miles of paving, but the contracts for which have not been certified because money is not available. This is to be the more regretted, from the point of view of the taxpayer, because of the fact that competition among the asphalt people has brought the price lower than it is likely to be again—as low as \$1 per square yard for asphalt paving on top of the old granite paving—the contract price is for the asphalt sheet alone, the rest of the work being done on separate contract. The prices paid vary from the figure quoted for sheet asphalt to as high as \$3.55 for a small section of granite block; and vitrified brick was put in to a small extent, by the preference of the taxpayers owning the abutting property, at \$2.55.

Just why the cost of vitrified brick should be so much higher in Brooklyn than in other parts of the country is not apparent, but the disparity is great. In Terre Haute, Ind., bids were made and contracts awarded during the past month for nearly a mile of paving and the asphalt people could not compete with the brick contractors. The awards were made on nine contracts with the prices ranging from \$1.41 to \$1.49. These prices precluded the possibility of anything like competition on the part of the asphalt people. In Brooklyn, and within a couple of weeks of the awarding of the contracts in Terre Haute, brick paving contractors made bids that averaged above \$2.50 per square yard, the specifications being practically the same. It may be that local conditions create these wide differences, but why they should differ so widely is something that cannot be explained. Assistant Commissioner of Public Works Lewis, of Brooklyn, who is very well informed in these matters, would not venture a guess, and he knows more about paving than most men in the country.

In St. Louis, on contracts that aggregated nearly 80,000 yards, there was a like disparity in the bids, and the prices both for granite and brick were much lower than in Brooklyn or on the contracts awarded during the summer in New York. Granite blocks on six inches of concrete were contracted for in St. Louis at \$2.26, and



on eight inches of concrete at \$2.34. Vitriified brick was contracted for at an average of \$1.50. The asphalt people did not get any of the contracts awarded, but if they were shut out in St. Louis they had things very much their own way in other cities.

The asphalt paving interest has increased enormously in the past few years. In fact, it has grown from nothing to its present proportions and there are now very few cities in the country that do not boast of some asphalt-paved streets. The raw material for the pavement is largely imported from the Island of Trinidad. There are some deposits in Venezuela, in the Sicily Islands and in Southern California. The Californian product has not yet come into very general use, but it is working east, and some of the lowest bids made in Brooklyn this summer were by the California people. The Trinidad asphalt is found in an immense lake of the bituminous stuff. It is taken out in a practically pure state and requires little refining. The pitch lake from which it is taken is a remarkable deposit. The pitch is easily taken out and the hole made by the removal of the stuff fills up in the course of a few hours. The Bermudez asphalt, which is found in considerable quantities in the state of Bermudez, Venezuela, is taken from small deposits and is refined for the removal of the vegetable matter that is mixed with it. In both the Bermudez and Trinidad product the bitumen is practically free from foreign substances and is very different to the Sicilian asphalt. This is found in combination with limestone rock. The rock is impregnated with the bitumen to the extent of seven or eight per cent. It is imported in the mass and ground in this country, the rock vehicle for the asphalt being utilized for the same purpose as the sand which is mixed with the pitch lake product. The California product is found in sand and is separated from the carrying body and again mixed with sand before using. As the Sicilian asphalt carries with it its own admixture of rock, and the whole mass makes expensive freight, it has been to a great extent restricted in its use to the coast cities. The Trinidad and Bermudez products are manufactured or mixed with sand to form the paving material in the cities in which contracts are taken. Several of the asphalt paving companies maintain these factories permanently and there are not less than seventy of them in the country. The importations of asphalt last year approximated 85,000 tons and seven-eighths of this came from Trinidad. The average value of the importation is about \$2.70 per ton. With this material the streets of American cities are rapidly being converted into magnificent thoroughfares. Asphalt is the paving of the present, whatever the paving of the future may be.

New York will presently, by the aid of asphalt, become one of the best paved cities in the world. This is not for the reason that asphalt is the cheapest pavement to lay. It is not. A few weeks ago there was a contract made for the laying of 300,000 yards of asphalt on Avenue B, and the contract price was \$2.93 per square yard. The price looks large, but it is not paid at once and the contractors guarantee that the roadway will be in perfect condition fifteen years after the contract is completed. It will not cost less than five per cent. of the contract price to maintain the road in repairs, and to guarantee this, one-third of the contract price is retained by the city

for the term of fifteen years. In some instances the contract is guaranteed by one of the big surety companies and the result is the same. New York has practiced this method of insuring good work on paving for some time, and other cities are falling into the same practice. Brooklyn only requires a five-year guarantee, and the argument is made that pavement that lasts the first five years through is likely to last for ten years more. The contract price is, of course, materially less when the guarantee period is shorter. The asphalt companies are generally willing to make contracts on these terms and that fact will have much to do with the extension of asphalt paving throughout the country.

With the close of the working season, in a couple of months, City Government will furnish statistics of the paving done in the country—something quite impossible just now for the reason that many of the improvements contemplated have been abandoned owing to the difficulty met with in placing improvement bonds. From the returns in the hands of the large paving contractors it is evident that the falling off from the anticipated amount of paving will be very large. The same returns show that all the contracts made are for asphalt or vitrified brick and that cedar block and other wooden materials for paving belong altogether to the past.

#### MUNICIPAL REVENUE IN EUROPE.

BY B. A. ULRICH.

When considering the question of raising a revenue for municipal expenses we should investigate the sources from which older cities like Paris, London and Berlin collect the necessary funds to meet their annual expenses.

Paris.—This beautiful, well-lighted, paved, and cleaned city collects and disburses 250,000,000 francs annually.

Francs.

Profits from various enterprises, such as markets, gas, water (which pays 12,000,000 francs), street railways, cabs, and other profitable monopolies, paid into the City Treasury annually, amount to.....	40,000,000
Collected from octroi taxes.....	140,000,000
Direct taxation.....	35,000,000
Paid from National Treasury.....	35,000,000
Total.....	250,000,000

The corporations manufacturing gas must pay the city 200,000 francs a year for the privilege of piping streets, .02 franc a year each cubic meter supplied, and half the net profit after paying 13½ per cent. on the capital stock of 84,000,000 francs, which stock cannot be watered. Two hundred million francs, or \$40,000,000, was paid into the city treasury from this source alone for ten years prior to 1893.

London.—The highways committee has recently added a million sterling to the revenue of London through its management of the question of tramways. The local government and taxation committee is fighting to secure a uniform basis of valuation for London.

The council reduces expenses by dispensing with the contractor and by engaging workmen under the supervision of its salaried officers. Experience in this line shows that work done by the contractor for 4s 7½d per square yard is accomplished for 3s 2d per square yard. Work estimated by an architect to cost £1,800, for which one



bid was £2,300, was performed for less than the architect's estimate and for £536 less than the lowest bid. The York sewer, which the engineer estimated would cost £7,000, for which one bid was made at £11,580 and another at £11,608, was done by the council at a net saving of £4,477. A dollar saved is as good for the city as a dollar earned.

The town council of Birmingham, held up as a model by Mr. Chamberlain to the citizens of London, dispenses with a contractor whenever it can.

The London County Council's precept for 1894-'95 was 14 pence on the pound. This precept includes all the charges of the Metropolitan Board, and also several other rates, which used formerly to be levied in other ways, such as the County Justice rates, the poor rates, and local vestry rates. It is owing to revenue derived from other sources in London that this assessment, to meet the enormous expenses of London, is not much higher. To save taxpayers from the expenses of repaving streets torn up by gas and other companies subways have been constructed in London, and the example should be followed in our city. These large subways have been constructed for wires, pipes and various conduits to protect the surface of the streets. They are to carry water pipes, illuminating and fuel gas pipes, telegraph and telephone wires, electric light and power wires, and pneumatic tubes.

Birmingham.—The market rights are controlled by the city, and a profit of from £8,000 to £10,000 is realized annually. The city builds the street railways and rents them to chartered companies at a profit to the city of many thousands of dollars annually. The city furnishes gas at 2 shillings 5 pence per thousand, and gains an annual profit of \$150,000.

Glasgow.—Albert Shaw states with reference to the tram lines: "The first lines were opened in 1872, and the lease then made terminated in 1894. By its terms the company was required to pay the corporation (1) the annual interest charge on the full amount of the city's investment; (2) a yearly sum for a sinking fund large enough to clear the entire cost of the lines at the expiration of the lease; (3) a renewal fund of 4 per cent. per annum on the cost of the lines, out of which they were to be kept in condition and reserved to the city in perfect order and entirely as good as new in 1894; and (4) a mileage rental of \$750 per street-mile.

"The total capital invested by the city in this enterprise was about \$700,000. The sinking fund amounted to a little more than \$1,000,000, which covers cost of the original system. There remains the cost of newer lines. The renewal fund placed the system in perfect repair, and the city received in rental money a sum amounting to about \$225,000. The company in the meantime earned good dividends and paid off its indebtedness. Now the tramways of Glasgow yield the municipal treasury a large income and require no public expenditure."

Berlin.—The profits from such city enterprises as water, gas, markets, and slaughter houses are very large. The former, which is entirely a system of direct taxation, furnishes \$9,000,000, or less than 50 per cent. The latter \$3,500,000 or 19 per cent. of the total income of the city. The city gas works pay a surplus of \$1,500,000 annually. City markets and slaughter houses a surplus of \$500,000.

The city railway companies pay 4 per cent. when total receipts are less than \$1,500,000, and 8 per cent. when they exceed \$4,000,000. In 1894 the income from this source amounted to \$300,000. The franchises were granted for forty years, at the end of which time the street-car lines become the property of the city.

Bologna, Italy.—The company controlling the concession for the right of occupying public streets pays the city in the following manner: First, 3 per cent. on the first \$100,000, or 500,000 lire; 5 per cent. on the surplus from \$100,000 to \$150,000, or 750,000 lire; 7 per cent. on the surplus over \$150,000 to \$500,000; 10 per cent. on the surplus over \$500,000.

An annual tax is collected from the slaughter-houses and the butchers. An octroi tax is also collected at the gates of the city. The city of Bologna has an agreement with the government to pay a fixed annual amount, amounting to \$274,000, in lieu of a state or national tax. The water of Bologna is furnished by a company that operates the old Roman water conduit; this the city reserves the right to purchase after the fifteen years of concession expire, the purchase price to be fixed by the capitalization of the revenue received at 5 per cent. at the time of redemption.

#### NOVEL METHOD OF LAYING RAILS.

A novel method of laying street railway track, at least new in the northwest, has been adopted this season by Thomas Lowry on his twin city system of street railway in St. Paul and Minneapolis. The company has relaid a large amount of track, using in some places an eighty-pound T-rail, and to make the track as permanent as possible the rails have been laid with what is known as a solid joint, and on a concrete foundation without wood ties. This makes practically one solid rail on each side, from one end of the line to the other. The method employed is quite simple. The rails are first lined up and the concrete put under, except at each joint, where a hole is left to enable the workmen to make the welding. The moulds used about the joints are about eighteen inches in length and fit snugly on the rail. A vertical clamp is also used to keep the rails from springing when the under part becomes heated with the hot metal. Sand is used about the mould to keep the metal from leaking through. A small blast furnace, mounted on wheels, is used in the preparation of the metal. Each joint takes 138½ pounds. After the mould is removed, sand is used for cooling the casting. To add to the firmness of the rails and the strength of the casting, a bolt is put through the end of each rail and projects on each side, thus becoming embedded in the casting. The engineer in charge of the work says very little trouble will be experienced from contraction and expansion with cold and heat, on account of the rail being so strongly embedded in the concrete and asphalt. In some instances the welding is done before the rails are laid in the concrete, to avoid the loosening of the rail where a defective casting has to be removed. In this manner the company secures a perfectly smooth track.

—The report of the finance committee of the board of aldermen shows that the total assessment of real and personal property for 1896 in New York City is \$2,106,484,905, an increase over 1895 of \$89,537,243.

## THE ORIGINAL WOMAN MAYOR.

The partisans of woman's rights will find much to interest them in a pamphlet recently published by Alphonse Goovaerts, the royal librarian at Antwerp, Belgium. Many will be surprised to learn that more than a century ago a woman for some time performed the duties of mayor of the impost town of Namur.

On the death of Mayor Malotteau, in 1734, his wife succeeded to his functions in the simplest manner possible, and without any interference on the part of the government. According to the archives of the privy council, there can be no doubt on the subject. Mme. Malotteau took her seat in the municipal chair, not only by permission, but very probably at the request of her late husband's colleagues.

The town clerk, who some years later, by orders of the Empress Marie Therese, drew up the list of changes in the personnel of the town's officers from 1400, merely added for the year 1734, "Bourguemaitre." "The widow performs the duties." The official reports of the time state that the widow Malotteau accomplished her task to the general satisfaction; moreover, a report from the bishop reveals that even during her husband's life she did most of the mayor's work.

"As for the office of mayor," wrote the bishop, to his serene highness, the governor of the lowlands, "it would seem that there is some irregularity in permitting the functions to remain in the hands of a woman. Nevertheless, as this woman is the widow of the last mayor, and as she performed almost exclusively all the duties of the position even during her husband's life; that since his death she has acquitted herself to the general satisfaction; and that, moreover, in order that the city might pay the interest on its debt, she herself lent money to the town, which has not yet been entirely paid back, it is on this account, in the interest of the town that she should continue in her present office, at least for some time."

In 1738 when the mayoress had held her position for four years, the Duke d'Ursel, governor of the province, petitioned the empress to have the office filled by a man. But Lambillou, president of the provincial council, was in favor of the lady mayor, and suggested to his fellow councillors that if the government insisted upon a man for the office, the widow Malotteau's young son should be appointed; in which case the young man's mother could continue as executive during her son's minority. The town council's motion prevailed, and Mme. Malotteau continued as chief executive of Namur.

It was only in 1769, when the governorship of the lowlands had passed to Prince Charles of Lorraine, that the privy council won their case; they presented as a candidate a certain Pierre Rasquin, and at the same time issued a long statement in the course of which they said that it was hardly to the best interest of Namur and the public that the office should continue as hereditary in the same family, and moreover transferred from husband to wife. This ended the reign of the lady mayor.

From a feeling of retrospective gallantry, Mr. Goovaerts does not betray the age of the interesting person to whom he has devoted so much attention; however, he gives one to understand that she was no longer young, so that this soul of a mayor in the body of a matron can hardly have retained much that was romantic.

The people of those western states in which full political rights have been granted to women will no doubt be pleased to learn that their ideas of to-day on the subject were already approved by citizens of an effete European monarchy a century and a half ago, though to some the news will be a disappointment when they realize that their pet theories are not so new after all.

## IDEAL MUNICIPALITY OF THE WORLD.

Glasgow has the distinction of being the ideal municipality of the world. This distinction it has won through its wise and bold management of its municipal affairs. The citizens of Glasgow have lived up to the city's motto, "Let Glasgow Flourish," as shown in their pride in all that pertains to the greatness and prosperity of their city. That the city has justly won its fame as a model municipality is evident to even the most careless observer. Its many parks and open breathing spaces, its model lodging houses, artisans' dwellings, public baths and wash houses, its noble public buildings, its spacious and clean streets, impress every observer. The great achievement by which the city cleft for itself a way to the sea so that the largest vessels afloat can discharge their cargoes at its wharves, is only equalled, perhaps, by its magnificent system of water-works by which the waters of blue Loch Katrine, "caught in cloudland," are piped into the city at a cost of a penny for every 379 gallons of pure mountain water. The water was brought through pipes and tunnels a distance of thirty-four miles at a total cost of about three-quarters of a million sterling, and thus Glasgow settled at once and cheaply the problem of a pure water supply for all time.

This city of less than a million inhabitants was also the first to point the way in urban transportation by acquiring the street tramways and giving the best street-car service in the kingdom at the least cost to the people. It has also undertaken to light the city with gas and electricity, an experiment which it will also doubtless make a success.

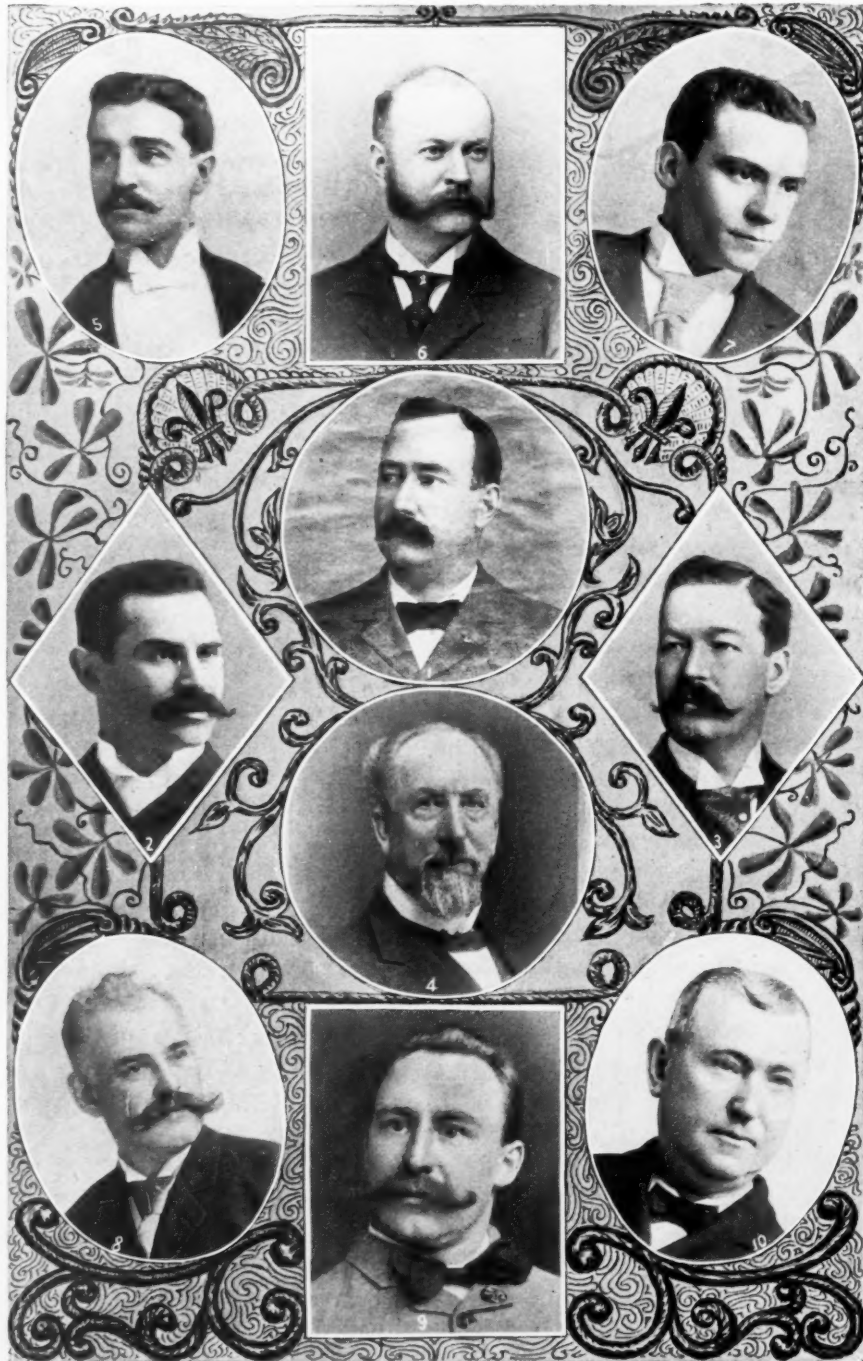
And as evidence of the wisdom with which these enterprises have been carried out it is stated that after January 1 next, no municipal taxes will be necessary, the revenue arising from the water department, the street-cars, gas, etc., being sufficient for municipal expenses.

These are achievements of note for any municipality, and constitute an enduring title to fame. The objections urged against municipal control in American cities may be valid, but if so they only redound the more to the honor of Glasgow, where the good of all seems to be the dominant purpose of all connected with the administration of the affairs of this model municipality.

—The Pingree potato patch commission of Detroit has made its annual report. There are 1,751 poor families, each of whom now has about a quarter of an acre planted with potatoes and other vegetables. The use of the land was donated, and the common council gave \$4,000, of which \$2,209.19 was spent for labor, seed, plowing, etc.

—Mayor Warner, of Rochester, has vetoed the action of the council in allowing \$30 for street-car fares for the investigating clerk of the city law department. The mayor says the clerk can walk or ride a bicycle.





9 GROUP OF PATERSON CITY OFFICIALS.

1—CHRISTIAN BRAUN, Mayor. 2—N. FLEISCHER, Park Commissioner. 3—JOHN R. LEE, Park Commissioner. 4—HENRY B. CROSBY, President Park Commissioners. 5—WM. W. STALTER, Alderman. 6—JAMES PARKER, Comptroller. 7—WALLACE CLOSE, Comptroller's Clerk. 8—JOS. S. LANG, Alderman. 9—LOUIS KIRSINGER, Alderman. 10—M. DELANEY, Alderman.



## CITY GOVERNMENT OF PATERSON.

BY S. H. AGNEW.

Paterson, N. J., is making rapid strides in the march of city improvements, without incurring an overburden of debt or taxation. The latest of these improvements is the new City Hall, which was opened and formally dedicated on July 6, last, when the keys were turned over by Watts Cooke, president of the city hall commission, to Mayor Braun. Since that time the government of the city of Paterson has been conducted from the new city hall, which is a credit, not only to the city, but to the county of Passaic, and the state of New Jersey likewise.

The total cost of the building as it stands is close upon \$600,000, and yet the entire bonded debt of the city at this time is but \$2,585,000. To offset this debt the city has assets of upwards of \$4,718,000, as follows: Real estate, \$1,927,322; personal property, \$290,832; unpaid taxes and assessments, \$2,500,000.

The assessed valuation of the city of Paterson is about \$45,000,000. The city's finances are in a healthy con-



10 CYRUS W. BALDWIN CITY TREASURER.

dition, and the sales of its bonds have shown evidence of its high credit. During the extreme monetary stringency that prevailed during the past summer the city maintained its high credit by promptly meeting every claim and making every payment as it became due. The municipal government received from the citizens the highest praise for the wise and careful management of the city's finances.

The population of Paterson is now upwards of 100,000. Paterson dates its foundation from 1791, when a company incorporated for manufacturing purposes, desiring to use the water power of the great falls, was organized under the auspices of that far-sighted statesman Alexander Hamilton. On May 17, 1792, it was resolved that the town of Paterson (named after the governor of the state) should be located at the great falls of the Passaic.

Less than five years ago, therefore, Paterson celebrated its centennial.

Not until 1851 was a city charter granted, and since that date its progress in population, wealth and influence has been extraordinarily rapid. In 1824 Paterson was but a village, the population being only 4,787; in 1825 it had increased to 5,084; in 1829, to 7,033; in 1850, to

11,334; in 1860, to 20,478; in 1870, to 33,579; in 1880, to 55,950; in 1885, to 67,000; in 1890, to 96,000, and to-day the population is considerably over 100,000. Per capita the debt is less than that of any other city in New Jersey, Jersey City owing about \$120 per head; Newark, about \$60; Hoboken, about \$35; Camden, \$28, and Paterson, \$25.

The city is governed by a mayor and board of aldermen, who are elected for two years. The present mayor is Christian Braun, who was elected in 1895. The city clerk is George Boyd, who was re-elected this year.

James Parker, the present comptroller of Paterson, was elected to the office this year. His term will not expire until 1898. Mr. Parker is a thorough man of business, and has effected several changes in his office.

Wallace Close is clerk to the comptroller. He was appointed by Mr. Parker to serve the full term of two years. It is generally conceded on all hands that Mr. Parker made a wise selection in the choice of his chief clerk, as Mr. Close is a shrewd, careful man of business.

The office of treasurer of the city of Paterson is filled by Cyrus W. Baldwin, popularly known among the more prominent citizens as "Our Cy." Mr. Baldwin, although still a young man, has been identified with the city government since April, 1884, when he was appointed as clerk to the board of aldermen, in which capacity he acted until 1889, when he was unanimously elected treasurer by the board of aldermen. He was re-appointed to the same position by the mayor, and has since been reappointed each term.

In 1893, when all her sister cities were affected and embarrassed by the financial condition, Paterson kept up her high credit, and through the careful management and clever financiering ability of Treasurer Baldwin promptly met every payment. That the Paterson city bonds have never been depreciated in value is due largely to the ability and foresight of the present city treasurer. So generally is this recognized, and so strong is the sentiment in favor of Cyrus W. Baldwin as a careful, able city treasurer that the present mayor (although opposed politically to Mr. Baldwin's way of thinking), in a message to the board of aldermen, recently, specially mentioned the matter of the able conduct of the city's finances, and especially thanked Mr. Baldwin for the able manner in which he had conducted the financial end of the city's affairs. This compliment was the more pronounced inasmuch as the mayor is a staunch democrat and Mr. Baldwin as staunch a republican.

Prominent among the members of the board of aldermen of Paterson is William W. Stalter, who has the distinction of being the youngest of the city fathers. Mr. Stalter has shown marked ability, notwithstanding his youth. He is only 28 years of age, and is manager of a large concern in Paterson, in which he is interested. He is chairman of the committee on police, and is also a member of the finance committee. Mr. Stalter was elected to the board of aldermen this year by a majority of 783 votes, the largest majority ever given to any candidate in the Third Ward, which he represents. In politics he is a republican. He is also a lieutenant in the Second Regiment of the National Guard of New Jersey.

Joseph S. Lang, who represents the fourth ward in the board of aldermen, is an old and tried city father, hav-

ing served on the board in 1892-'93. He was elected a second time this year and his present term will not expire until 1898. Mr. Lang is chairman of the finance committee; he is also a member of the committees on police, charities and correction, and printing.

The sixth ward is represented by Louis Kirsinger and Michael Delaney, both prominent merchants and old citizens of Paterson. Louis Kirsinger was assistant postmaster of Paterson during President Cleveland's first administration. He also acted as one of the commissioners on education during two terms. He was elected to the board of aldermen on the democratic ticket in 1895. He is chairman of the committee on licenses, and is also a member of several other committees. Mr. Kirsinger's election was at the time considered a strong proof of his popularity, as he beat "Candy" Miller, the republican candidate, who was thought to be invincible in the sixth ward, having held the office continuously for fourteen years. Michael Delaney was elected by a large majority on the democratic ticket during the present year. He is chairman of the committees on health and the district court. He is also a member of the committees on printing, public parks, legislation, and that on conference with the board of health.

Another line of progress in the government of the city of Paterson is in the way of public parks. As late as 1887 Paterson was sadly lacking in parks or "breathing spaces" in the heart of the city. About that time, however, through the indefatigable efforts and ceaseless perseverance of Henry B. Crosby, one of Paterson's oldest and most prominent citizens, a small park in the vicinity of the Falls, was beautified and dedicated to the free use of the people. In this park a handsome monument was erected to the memory of the citizens who died in the War of the Rebellion; and an observation tower was also erected. Away back in the seventies, Mr. Crosby began an agitation for public parks and "breathing spaces for the people." By "the people" Mr. Crosby meant the great majority of the inhabitants of Paterson, who spend most of their waking time (about ten hours daily) in factories and mills. He contended that these mill and factory operatives who were in the noise, dust and bustle of the factories, where the air at best was none of the purest for nine or ten hours daily, required some place where they could walk with their children, wives or sweethearts in the evening, and breathe pure air. In his project for "breathing spaces," Mr. Crosby met with great opposition. The wealthy citizens manifested an utter indifference, or strenuously objected to the project, on the ground of taxation. Others objected for other reasons, and for years Mr. Crosby continued the fight against tremendous odds and opposition, alone and single-handed. It was his hobby, his pet scheme, his one ewe-lamb and he kept hammering at it with a perseverance worthy of the cause, until he saw his efforts crowned with success.

No one can question the fact that H. B. Crosby is the grandfather, father and godfather of the Paterson public parks project. This feeling is so generally recognized that the suggestion has frequently been made that one of the parks should be named after him. When Mr. Crosby was alone in the idea and work of securing parks for the people, a less persistent and energetic man would have given up the task in disgust. At first his talk created no

impression, but with pen and tongue, in the public streets, in the columns of the newspapers, in the board of trade, at citizens' meetings, everywhere, Mr. Crosby talked and wrote about public parks, until like the "constant dropping which wears away the stone," he succeeded in arousing public interest and attention, and finally, on Monday, March 19, 1888, he was rewarded by seeing the movement fairly started, by the adoption by the board of aldermen of a resolution favoring the park ordinance. In the exuberance of his enthusiasm, Mr. Crosby had the bell of the First Baptist Church rung in honor of the first public parks in Paterson. Now, after a quarter of a century of ceaseless labor, the father of the parks has the satisfaction of knowing that Paterson is well provided with "breathing spaces" and her parks are among the prettiest and finest in New Jersey.

Henry B. Crosby is president of the park commission. The commission is composed of six members besides the president, all of whom are leading citizens of Paterson. Nathan Fleischer, one of the park commissioners, is a public-spirited man. He conducts one of the largest businesses in the city, and is broad-minded and liberal to a degree. John R. Lee is another of the right sort of men to be on the board of park commissioners. He is one of the most progressive of Paterson's prominent men.

The city government of Paterson is complete and every office is filled by competent men. The board of aldermen consists of sixteen members, two from each of the eight wards composing the city. There are boards of commissioners of assessments of taxes, commissioners of appeals and revision of taxes, commissioners of public instruction, a board of health, an efficient police department, an excellent fire department, a normal training and model school, a high school, and an adequate number of primary and grammar schools. The school buildings are exceptionally fine and there is a city almshouse and a free public library.

Paterson is essentially a manufacturing city. It is well situated for that purpose, having an abundant water power. It is destined to become a great city. At its present rapid rate of growth, its real estate is bound to appreciate in value.

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—The board of public works of Indianapolis has agreed upon a new telephone ordinance. By its terms the Central Union Telephone Company, which already has a plant, is to bury its wires in the central mile square of the city, is to give high-class service, and pay \$6,000 a year to the city; and to maintain rates on a par with those of other cities of equal size. The Phoenix Telephone Company, as yet without a plant, has also agreed upon terms with the board of public works, which are more liberal as to annual payments. The amounts begin at \$1,000 and grow by \$1,000 yearly, until \$6,000 is reached. This company promises rates at about one-half the Central Union's prices, or about \$2 for residences and \$3 to \$4 for business houses. The council is yet to pass upon both these ordinances, and some opposition has developed there, particularly against the Phoenix company.

—The Detroit museum of art, which draws a subsidy of \$5,000 from the city annually, had 94,000 visitors during the past fifteen months and seventy-five art pupils.



## A BUSINESS MAN IN POLITICS.

BY S. H. AGNEW.

Timothy L. Woodruff, of whom Brooklyn is justly proud as a city and county official, was nominated on the first ballot at Saratoga on Aug. 26 for the office of lieutenant-governor of the state of New York, by the delegates of the Republican state convention.

Mr. Woodruff had an overwhelming majority on the first ballot, and the nomination was made unanimous. Whatever question there may be on other acts of the convention at Saratoga, there is none as to the wisdom of the choice of a candidate for lieutenant-governor. Mr. Woodruff is a dyed-in-the-wool republican, a man of determination, and strong personal magnetism. He is young, vigorous, brilliant and indefatigable. Some con-



// TIMOTHY L. WOODRUFF.

ception of his business capacity may be formed from the following list of offices, all of which are filled by Mr. Woodruff with credit to himself and satisfaction and pride of the various communities, companies, associations and societies with which he is connected. Mr. Woodruff is:

- Brooklyn's Commissioner of Public Parks.
- President and Principal Proprietor Maltine Manufacturing Company.
- Trustee City Savings Bank of Brooklyn.
- President The Knapp Extract Company.
- President Co-operative Building Bank, New York City.
- Treasurer Worcester Salt Company, New York.
- Director and an Incorporator of Hamilton Trust Company.
- Director Manufacturers' Trust Company.
- Director and an Incorporator of Kings County Trust Company.
- Director Preferred Accident Insurance Company of New York.
- Director Merchants' Exchange National Bank, New York City.
- Member of the New York Chamber of Commerce.
- Member of the Manufacturers' Association of Kings and Queens Counties.
- President Board of Trustees of Adelphi Academy.
- Director, and Chairman of Finance Committee, Montauk Club, Brooklyn.
- President Dyker Meadow Golf Club.
- Director and Secretary Riding and Driving Club.
- Member Union League and University Clubs of New York City.
- Member League of American Wheelmen.
- Member Cycle Club of Brooklyn and Good Roads Association.
- Member Union League, Crescent, Hamilton, Athletic, Logan and Republican Clubs of Brooklyn.

In addition to the foregoing trusts and positions held by Mr. Woodruff, he belongs to several political, society

and church organizations and associations, and not as a mere figure-head or member, for he is a live factor in whatever enterprise or society with which his name is associated.

The present republican candidate for the office of lieutenant-governor of the state of New York is yet a young man, having but recently passed his thirty-eighth birthday. He was born in New Haven, Conn., on August 4, 1858. Both his paternal and maternal ancestors were early settlers in Connecticut. For ten years, from 1855 until 1865, his father, John Woodruff, was a representative in congress. Both his parents died before Timothy L. Woodruff was ten years of age. His earlier education was acquired at the Phillips Academy, Exeter, N. H., and he afterward entered Yale College, from which he graduated in 1879. While at college he was a member of the Psi Upsilon and the Skull and Bones, two of the most prominent of the college societies. After leaving college he took a business course in the Eastman College, Poughkeepsie, N. Y.

Mr. Woodruff's business career began with a clerkship in the firm of Nash, Whiton & Co., in 1880, in which capacity he acted for one year, when he was admitted to partnership. The firm was succeeded by the Worcester Salt Company, of which the subject of this article is now the treasurer. When less than twenty-five years of age Mr. Woodruff became interested in grain elevators, and in 1887, at the age of 29, he was proprietor of the Franklin, the Commercial, the Nye and the Waverly stores and two large grain elevators. He was elected a director and secretary of the Brooklyn Grain Warehouse Company, on the organization of that company in 1888. He was one of the prime movers in the formation and among the incorporators of the Hamilton, the Manufacturers' and the Kings County Trust companies.

Mr. Woodruff is an ardent and earnest republican, and a tireless worker for the good of that party. He is no less prominent in social life, religious and charitable work than in business and political life. In church and charitable work he is helped in no small degree by his pretty and amiable wife. Their home at Eighth avenue and President street, Brooklyn, is a prominent social centre. Mr. Woodruff is an enthusiastic horseman and cyclist. With all his business, political and social interests, he finds time for healthful recreation, as may be judged from the picture presented with this issue of City Government.

## PINGREE WOULD BE A "POO-BAH."

Mr. Pingree's term as mayor of Detroit does not expire until the close of 1897. He will, if elected, become governor of Michigan on January 1, 1897. He is determined to hold both offices. There is nothing in the constitution and laws which prohibits it directly. The governor has the removal power over the mayor, and hence some say that it would be incompatible for one man to be both governor and mayor. The present corporation counsel, a Pingree appointee, says that he may legally remain as mayor after his election as governor. Pingree hopes when he becomes governor to carry out his old plan of securing a Federal charter for Detroit.

## STREET PAVING IN BUFFALO.

The reputation of Buffalo as a well-paved city is co-extensive with the name of the city itself, and it is one of the many things in which its citizens take especial pride and which they lose no opportunity of impressing on the mind of the visitor from some less-favored point. It is claimed, and it is believed that the claim is well founded, that in no other city in the world, with the possible exception of Paris, are there so many linear miles of smooth pavement, while Washington, by reason of the slightly greater average width of its streets, is the only American city approaching Buffalo in the area of smooth pavement in square yards.

It was very early in the city's history, when it was yet, in fact, but a village, that the importance of pavements became recognized. Joseph Ellicott, the surveyor of the Holland Land Company, who assisted Maj. l'Enfant in the work of laying out the nation's capital, was the real founder of Buffalo, and in the second decade of the present century he had completed his plans for what is now the business portion of the city, and had described the town which he hoped to see grow under his own fostering oversight as "a well-paved and well-lighted city, with broad avenues running in every direction from a central point." Joseph Ellicott died in an insane asylum, his mental derangement being aggravated, if not caused, by the action of the highway commissioners of the early '20s, in refusing to carry out all of his plans for the welfare of the future Buffalo. The successors of these men, however, recognized the wisdom of Ellicott's ideas, and good, substantial stone pavements were laid on the principal streets as early as 1835, although some of the main thoroughfares leading to the neighboring village of Black Rock were still mudholes as late as a decade after that date, and the old Indian trail which was followed in the laying-out of Main street was still unpaved for a large part of its length. Still, in 1850 travelers visiting Buffalo were struck by the number and extent of the paved streets, which some writers declared to be "equal to that of any European city and far superior to most." Since that day there has been steady and very rapid progress in this direction, and the miles after miles of asphalt and smooth stone block pavements bear witness to the spirit of progress which was instilled by old Joseph Ellicott.

There is another reason why Buffalo is a well-paved city. It is essentially a city of small homes. Perhaps in no other city of the world, of equal population, is there so large a percentage of individual house-holders. The system of ground-rentals and the holding of large tracts of property by individual estates has never obtained to any appreciable extent, and it is the rule rather than the exception that the working man, the business man and the laborer should own his own cottage or mansion. The result of this has been that every citizen is directly interested in having the street in front of his own home, at least, well-paved, and where the holdings are small, the total amount of the paving tax that one person must pay is so light that there has been at no time any great difficulty in securing the consent of a majority of the property-owners on a street to lay asphalt pavements. In cities where large tracts are held by individuals or estates, the holders of which may be non-residents, there

is utterly lacking the spirit of interest in the city's welfare, and there is not present the desire for individual benefit from local improvements which actuate the men who have made Buffalo. In such cases there is, too, the pecuniary difficulty of paying for an extensive stretch of pavement, which is hardly felt when the proportion of each individual is so small as is usually the case in Buffalo.

It was in 1878 that the first asphalt pavement of any length was laid in Buffalo. The Abbott Paving Company came to Buffalo and laid a small sample pavement at the intersection of Main and Tupper streets. This was the means of securing the contract for the paving of Delaware avenue, which was completed before Jan. 1, 1879, and from that time to the present the work of laying asphalt pavement has gone on rapidly, new companies coming into the field, some of them being absorbed by others, while others have remained independent and are laying their share of asphalt.

The 317.079 miles of pavement of various kinds in Buffalo to-day, according to the latest figures of the Bureau of Engineering, consist of the following materials: Asphalt, 192.91 miles; stone, 117.508 miles; brick, 4.045 miles; stone resurfaced with asphalt, 1.526 miles; macadam, 1 mile. The foregoing figures do not include park roads and parkways, which are under control of the park commission and include some 50 miles, principally macadam, with perhaps 10 miles of asphalt. There are in process of construction 14.56 miles of pavements, 13.326 miles of this being of asphalt and 1.234 of brick.

There has been little distinction in the kind of streets on which these different kinds of pavements have been laid. Business thoroughfares, pleasure drives and residence streets alike are found paved with all of the various kinds. The recent practice of the engineering department, however, has been to lay stone pavements on all streets having a grade of over 2 per cent, but there are few points in Buffalo where the grade equals this, and on some of the steeper hills where asphalt was laid several years ago it still gives good satisfaction. Some of the more recent pavements laid in the section of the city where heavy teaming is done have been of stone, but some of the largest engineering and boiler-making establishments, where the loads to be hauled will go as heavy as twenty tons, front on asphalt-paved streets, and the pavement shows little if any signs of wear, although such loads have been hauled over it for several years. A 60-ton monument hauled on a four-wheeled truck over five miles of Buffalo asphalt pavements left no traces of its passage except for about half a mile, where marks an inch deep were made in the asphalt.

The cost of the pavements is variable. New prices are made with almost every bid, and every piece of work is let under a separate contract. The average figures for 1895, however, were \$2.60 a square yard for asphalt, \$2.47 for brick, and \$3.00 for stone. Much higher prices than these have been paid in the past, but competition in the asphalt business is brisk and there is little likelihood that the price of such paving will increase in the near future.

The cost of maintenance of the different kinds of pavement has been very slight. The principal repairs in recent years have been to asphalt-paved streets, the stone



pavements being either so new that they have not required mending, or having been resurfaced or replaced with asphalt. The average cost to the city per square yard of all streets under its maintenance for repairs was 5.1 cents for the past year. The cost per yard of streets repaired was 7.4 cents, while the actual cost per yard of surface repaired was \$1.54. Under the system of contracting in vogue, the contracts for pavement require the contractor to maintain the pavement at his own expense for a period of five years. This is usually sufficient to cover all damage from the settling of the ground and similar causes, and after the expiration of the guarantee there is little but the normal wear and tear to be provided for. The city has a contract with the Standard Paving Company for all repairs of an ordinary nature, and with the Barber Asphalt Company for repairs made after the laying of water pipes and mains. The Standard Paving Company's contract is at \$2.25 a square yard, while the Barber Company's contract is at \$2.69 a square yard.

Competition in the pavement business has been brisk in Buffalo. Several new companies have been formed since the Barber Asphalt Paving Company, the successor of the old Abbott Paving Company, began to do business here, and while some of them have been absorbed by the larger concern, others are still doing business and laying an excellent quality of pavement, at a slightly higher price, in most instances, than that asked by the Barber company.

Under the system of competitive bids, specifications are submitted by the engineering bureau for every kind of pavement in all cases where there is a petition for paving, even though the petition may call for one particular kind. In such cases, there is usually another petition presented after the bids have been opened, asking that the cheapest pavement be laid, or even if the higher-priced pavement is used, in accordance with the terms of the petition, the bids furnish a valuable object-lesson to the people who have the paving to pay for, with the result that every company gets its fair share of petitions and of the business done in the city.

All paving is done by order of the common council, usually after a petition signed by the majority of the property-owners on the street to be paved has been submitted. Bids are advertised for, and any one is free to bid. The specifications are very complete and thorough. In the first place, there is a general specification for all kinds of city work, which recites the general provisions of the charter regarding the employment of citizens, the method of paying men employed by the contractors, the time of payment to the contractors, and similar matters.

Then there is a general pavement specification, applicable to all paving work, whether of asphalt, stone or brick. It recites that the street shall be graded two feet wider than the width of the paving, to such grades as the chief engineer may direct, soft or spongy places to be well rammed and the whole to be rolled with a five-ton steam roller. The provisions regarding curbs, manholes and receivers are included in the general specification, also the laying of tile under the curb, which is done in all cases, it having been found that unless such drainage were provided, surface water working under the pavement caused much damage. In the general specification is included the provision for the contractor's guarantee, a bond for

which must be filed by the contractor, the bond to continue in force until the guarantee term of five years has expired and the pavement has been accepted by the city.

For the different classes of pavement, different specifications in addition to the general specification are provided. There is a general asphalt specification. This specifies that all asphalt pavements must have a total depth or thickness of  $9\frac{1}{2}$  inches, composed of a concrete base of six inches, a binder course of  $1\frac{1}{2}$  inches, and asphalt surface of two inches. The concrete consists of one part, by measure, of cement, two parts of sand and five parts of broken stone of a minimum size of  $2\frac{1}{2}$  inches in any diameter. This must be allowed to set before the binder course is laid.

The binder course, laid over the concrete base, consists of broken stone or gravel, not exceeding  $1\frac{1}{4}$  inches in diameter, and coal-tar residuum, commonly known as No. 4 paving composition, or its equivalent of asphaltic cement. The gravel, stone and paving composition are heated in revolving heaters and thoroughly mixed by machinery in the proportion of one gallon of cement or paving composition to one cubic foot of stone. This is hauled to the work while hot, spread with hot iron rakes to a depth of two inches and immediately rolled with a five-ton roller to a thickness of  $1\frac{1}{2}$  inches.

Separate specifications are provided for the different varieties of asphalt, all of which are subject to the approval of the chief engineer, both as to chemical analysis and as to treatment and mixture. A chemical analysis of the material to be used is required to be furnished, and bitumen is not allowed to form less than 9 or more than 11 per cent. of the wearing surface of the pavement.

The specifications for Trinidad asphalt prescribe the use of a mixture for the upper surface of the pavement prepared from the best quality of pure Trinidad asphalt, mined from the so-called pitch lake in the Island of Trinidad, unmixed with any of the products of coal tar or other inferior bituminous products. The wearing surface is composed of 12 to 15 per cent. asphaltic cement, 70 to 83 per cent. of sand, and 5 to 15 per cent. of pulverized carbonate of lime. The carbonate of lime may be reduced or omitted when suitable sand can be obtained. This is heated and brought to the ground at a temperature of 250 degrees, laid on the binder course and spread with hot rakes, afterwards rolled to the proper thickness, after which a small quantity of hydraulic cement is brushed over the surface and the whole rolled with a five-ton roller so long as the roller leaves any impression on the pavement.

The specifications for German rock asphalt pavement, which is next to Trinidad asphalt in popularity in Buffalo, although a trifle more expensive, prescribe a compound composed of a fluxing material, Trinidad asphalt together with heavy petroleum oil or the residuum of the same, sand or fine gravel and imported German rock asphalt or German rock asphalt mastic. These ingredients are combined in the following proportions: German rock asphalt, 30 to 35 per cent.; Trinidad asphalt, 10 to 15 per cent.; sand or fine gravel, 40 to 55 per cent.; petroleum, 5 to 10 per cent. This composition is heated to a temperature of 200 degrees and spread without rolling on the binder course, smoothed even and sprinkled with sand and cement, which is afterwards swept off.

The specifications for Sicilian rock asphalt pavement

provide for a wearing surface composed of a mixture of three to four parts of the natural bituminous lime-stone rock from the Sicilian mines at Ragusa, with one part of that from the German mines at Vorwhole, both rocks being equal in quality and composition to that mined by the United Limmer and Vorwhole Rock Asphalte Company, Limited, and prepared and laid as follows: The lumps of rock shall be crushed and pulverized and the powder shall pass through a screen, the two kinds of rock being thoroughly mixed in the mill. Nothing whatever is to be added to or taken from the powder obtained by grinding the bituminous rocks. The powder is heated to a temperature of about 100 degrees, Fahrenheit, and brought to the ground in suitable carts and carefully spread, after which it is rolled and rammed to a thickness of two inches. There is very little of this pavement in use in Buffalo.

Specifications are also prepared for genuine American bituminous rock pavement, consisting of a mixture of American bituminous rock from the mines of Kentucky with that of the German mines at Vorwhole, prepared in a similar manner to that prescribed for the Sicilian rock. Practically none of this kind of pavement has been laid, however. Bermudez asphalt, from the pitch lake in the State of Bermudez, Venezuela, is also provided for in the specifications, it being treated in the same manner as Trinidad asphalt, but none of it has been laid in Buffalo.

The specifications for stone paving prescribe the use of dressed blocks of Medina sandstone. This has been found far superior to granite for this purpose, and has given excellent satisfaction in actual use over a period of many years. All stone pavements are laid on a base six inches thick, composed of concrete prepared in the same manner as for asphalt. Over this is placed a cushion of sand two inches thick. Then the wearing surface, composed of dressed block Medina sandstone is laid. It is prescribed that each block shall be not less than three nor more than four and three-quarters inches thick, not less than six and one-half nor more than seven inches deep, and from seven to twelve inches long. The surface of the stones to have parallel sides and ends with right-angled joints, and so prepared that when in place and resting against the adjoining block, the joints in their widest parts shall not exceed one-half inch in width for a distance of at least three and one-half inches from the top down. The blocks are to be set in uniform rows, breaking joints at least two inches and resting against blocks in the same and adjoining courses. Those in the same row not to vary more than one-quarter inch in thickness. Blocks of the least depth allowed not to be bolstered up. No gravel or sand to be placed on top as blocks are laid. Blocks to be set perpendicular to the grade and in right-angle courses across the street, except at street intersections, where the courses are to be set at such angle as the chief engineer shall direct. After the stones are laid they are rammed in the usual manner, and the joints or spaces between the stones are filled with a composition of sand or gravel with coal-tar distillate, known as No. 4 paving composition, at a temperature of 300 degrees Fahrenheit, or with a similar composition of Portland cement, as the chief engineer may direct. Then the surface is covered with screened gravel half an inch in thickness.

The specifications for brick paving prescribe the following tests for the brick used: The brick shall be sound, best quality hard-burned paving brick, burned expressly for paving. They must be rectangular, straight, free from cracks, all rough projections and other defects. They shall not be less than two by three and one-half by seven and one-half inches, nor more than three and one-quarter by four and one-half by nine and one-quarter inches, but no brick from the same manufacturer in the same work is to vary more than one-quarter inch in any dimension. They must have a crushing strength of not less than 10,000 pounds per square inch when tested whole on edge. The average absorption of any three brick must not be more than 3 per cent. of their weight when dried and immersed in water forty-eight hours. If the average loss of any three brick be more than 30 per cent. of their weight when subjected to the prescribed abrasion test, the brick of which they are samples will be rejected. The first tumbling of bricks shall continue for one hour in a barrel three feet long and two feet diameter, with thirty to thirty-five revolutions per minute, containing about 100 pounds of scrap iron and about 100 pounds of pig iron. The second tumbling of bricks shall continue for two hours in the same barrel, containing scrap-iron only.

After the brick has been accepted, it is laid in a similar manner to the stone pavement, the six-inch concrete base being covered with an inch layer of sand, on top of which the bricks are laid on edge, the joints being filled with the asphalt or cement composition as prescribed for stone.

All payments for paving are made to the contractors in five annual installments, and are paid for by special paving tax, levied on the property abutting on the streets paved, and paid in the same manner.

A few stone-paved streets have recently been re-surfaced with asphalt. The old pavement has given a substantial bed for the wearing surface, holes and depressions being filled in with concrete and leveled off smooth before laying the asphalt. This has answered very well except where there have been car-tracks in the street, in which case it has been necessary to relay the stones near the tracks. This is much less expensive than the original pavement of asphalt, but is still considered as an experiment by the local engineering bureau.

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—The nomination of Mayor Pingree for governor of Michigan has increased Detroit's chances of securing a new charter at the next session of the legislature. If elected, he will make it a point to get a charter on the Federal plan. He will also insist on the passage of a bill to place land owned by railroad companies on the tax rolls. In Detroit, the railroad land pays no taxes whatever.

—The council, of Litchfield, Mich., has passed an ordinance which declares that it is unlawful for any person to keep billiard, pool or card tables for public use, rent or hire or to allow them to be used anywhere in the village. The penalty for the violation of this ordinance is a fine of \$100 or ninety days' imprisonment. The ordinance as it reads, prohibits even progressive pedro and whist parties.



## DES MOINES AND ITS WATER-WORKS.

The water-works company at Des Moines, Ia., has all kinds of trouble on its hands. The city and the private consumers have complained for years that the plant is inadequate to fill the demands made upon it, and in consequence the company finds it rather difficult to avoid making necessary improvements. Then there is the question of rates, which are too high according to the notion of the people, and too low according to the representations of the company. Some time ago the city council adopted an ordinance fixing the water rates, but this was recently pronounced invalid by the courts, and another ordinance has now been passed. The rates fixed by the new ordinance, it is claimed, will yield the water company an annual revenue of about \$103,000, which is about \$23,000 less than the company claims it requires to meet its yearly fixed charges and operating expenses. The company will probably attack the new ordinance in the courts. The troubles of the corporation do not end here. Mayor MacVicar has thrust another thorn in its side by vetoing a resolution to pay it \$14,350 for public water service during the first six months of this year. The mayor sets up the claim that the company is overdrawn in its account with the city, and gives the figures to prove it. The overdraft is ascribed by the mayor to the alleged fact that, by design or unwittingly, during the life of the old council the company was permitted to render bills based upon the rates of former ordinances, when they should have been made out at the rates fixed by subsequent ordinances. These bills, the mayor claims, were presented and allowed in the manner indicated, and in addition to these alleged excessive rates the company made out and had allowed bills amounting to several thousands of dollars for water used at the public watering troughs, which the ordinances then in force provided should be furnished free of charge to the city. In these and various other reputed devious ways the company is said to have collected nearly or quite \$16,000 to which it had no legitimate claim. Therefore, taking into consideration such moneys drawn, the mayor arrives at the sage conclusion that the city, at this time, instead of owing the water company \$14,350, has really overpaid its bill to the extent of between \$1,200 and \$2,000.

After all this trouble comes an organization of taxpayers clamoring for municipal ownership of the water-works. The value of the present plant, as judged by competent authorities, is \$675,000 at the most. A resolution has been adopted by the citizens' organization urging the council to offer the water company \$800,000 for the plant. If this offer is ever made it is dollars to doughnuts that the company will not accept it, notwithstanding the claim that the poor and friendless corporation is a money loser.

## NEW PUBLIC HEALTH LAW.

New duties will be forced upon the health officials of villages, towns and cities in the state of New York by an amendment to the state factory laws which goes into effect on Sept. 29. The amendment provides, first, that in no mercantile establishment shall any child under fourteen years of age be employed at all. Second, no male under sixteen, and no female under twenty-one, shall

work in any such establishment at the rate of more than ten hours a day or sixty hours per week, nor before seven in the morning nor after ten in the evening. During the Christmas holidays, however, overtime work is to be allowed. Third, proper and convenient lavatories and toilet rooms and chairs must be provided, and no women or children are to be allowed to be employed in the basement of a building unless it is properly lighted and ventilated. Forty-five minutes must be allowed for the noon-day meal.

A register is to be kept by the employer, giving the name, age, birthplace, place of residence, and personal description of the employee, supported by a certificate from the board of health that the register of age is correct, and that the child is physically able to perform the work it intends to do. An affidavit is also required from the parent or guardian. Proof that a child has had regular instruction for a school year is necessary, and as to this the parent or guardian must satisfy the board of health. An exception is made in the case of children of twelve years or upwards, who are allowed to work during school vacations.

For any violation of the act the punishment prescribed is a fine or imprisonment, or both, and the board of health is also empowered by summary process, to compel the employer to introduce the lavatories and toilet rooms required.

## THE COLUMBUS BUDGET.

The Columbus, O., tax levy for 1897 has been fixed. The city levy will be 6.87 mills, to which will be added the levy of the sinking fund, 4.74 mills, making the total city levy of 11.61 mills. This is estimated to realize on the tax duplicate of \$61,000,000 about \$708,210. A comparison of the new levy with the levy of last year makes the following showing:

Funds.	1897. Mills.	1896. Mills.	Inc.	Dec.
City.....	6.87	7.36	...	.49
Sinking fund.....	4.74	5	...	.26
School board.....	6.70	6.04	.66	...
County.....	5.85	5.85	...	...
State.....	2.84	2.75	.09	...
Totals.....	27	27	.75	.75

The city levy is divided for department funds as follows:

Funds.	Mills.	Amount.
General expense.....	1	\$61,000
Police department.....	1.42	86,620
Fire department.....	2.28	139,080
Sanitary.....	.38	23,180
City hall.....	.075	4,575
Gas and light.....	1.14	69,540
Sewers and drainage.....	.095	5,795
Library.....	.165	10,065
Poor fund.....	.025	1,525
City park.....	.05	3,050
Goodale park.....	.07	4,270
Franklin park.....	.07	4,270
Hamilton, Jefferson and Lexington, M. D. & W. and Livingston parks.....	.005	305
Workhouse.....	.095	5,795
Totals.....	6.87	\$419,070

# CITY GOVERNMENT.

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IN MUNICIPAL AFFAIRS.

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## AN IMPORTANT EXPERIMENT.

The voters of the city of Holyoke, Mass., have adopted a new charter, which, it is claimed, will remove many of the possibilities for municipal extravagance and corruption. The chief features of the new charter from which great results are expected are only three in number, but they involve radical changes. The first is a substitution of a single legislative body for the present bicameral system, to be called the board of aldermen, consisting of twenty-one members elected from the city at large instead of from wards. Members will serve terms of three years, one-third only being elected in any one year after the first election.

This will do away with those local statesmen who gain fame, and frequently gather spoils, by reason of their dominating influence as ward politicians. In order to become a great factor in the legislative body of Holyoke, or the election of its members, a man must have influence sufficiently expansive to cover the whole city.

The principal argument in favor of two legislative bodies in a city is that such an arrangement is necessary to guard against hasty action, but this is provided against in the Holyoke charter by requiring every order, resolution or ordinance to be read twice, with an interval of three days between the two readings—except where, as in cases demanding immediate action, on the written recommendation of the mayor, a final vote may be had on the same day, two-thirds in this case being required to carry.

The second notable feature is the introduction of the system of minority representation. This is secured by allowing each elector to vote for only five of the seven aldermen to be chosen each year. This reform has long been agitated, not only in cities, but in state and national politics.

The third of the important features is the concentration of executive power in the hands of the mayor. He shall appoint, and may remove for stated cause at will, three persons who compose the board of public works; three fire commissioners; a city solicitor; a city marshal, a board of health, composed of three persons; a city engineer and a clerk of the board of public works. This is a concentration of executive responsibility, as well as of

power. It is a wide departure from the methods generally adopted, but there is a tendency in that direction.

## CREOSOTED BLOCKS AT INDIANAPOLIS.

Indianapolis is trying its first creosoted blocks. Members of the board of public works have recently been in the far South and came back so enthusiastic on the subject of creosote that the asphalt and the brick men are somewhat disturbed over the quality of future pavements here. The city has given such encouragement to the belief that these blocks have a future in Indianapolis that a plant has been established in this city, and is now turning out the first creosoted blocks that have been prepared north of Mason and Dixon's line.

The city is putting down cedar blocks creosoted in North Illinois and Michigan streets, and the board of public works announce its purpose to use Southern yellow pine in some contracts that are about to be let. The blocks are to be laid diagonally, so they will be least liable to damage horses' feet. The Illinois street work has met with objection, but it is based upon the delay in completing the work rather than the quality of the blocks. There is some curiosity as to how the work will compare with other extensive permanent improvements, especially of asphalt and brick on a concrete foundation, that have been made in the last three years. President Bowning, of the board, says he believes the expense of permanent improvements can be immensely reduced by the use of creosoted yellow pine blocks. These he believes will last twenty-five years.

A side issue that has grown out of the use of creosote comes from the claim that the creosote is destructive to rubber. There are 12,000 licensed bicycles in use in this city, and probably 20,000 wheels in all. Some of these have been damaged, it is claimed, by the fresh creosote, but the city engineer says the creosoted surface might at first prove hard on the rubber tires, but would very soon dry and harden, and would then be no longer damaging. Should the bicycle fraternity take sides as a unit on this question, they would pretty nearly prevail, for in no city of equal size, perhaps, in this country, are they so numerous and aggressive.

## NEW ORLEANS CIVIL SERVICE COMMISSION.

One of the most important recent municipal events at New Orleans was the appointment by Mayor Flower of three civil service commissioners. Under the new city charter all of the offices of the city government, except a few major ones, come under civil service, and hereafter persons will have to secure them by competitive examination. The civil service commissioners appointed by Mayor Flower are Ashton Phelps, president of the "Times-Democrat" Publishing Co.; John M. Parker and E. J. Hamilton. All three gentlemen are highly esteemed in the city, and are representative business and commercial men.

—Joseph Downey, commissioner of public works, at Chicago, has issued the following notice: "To the heads of all bureaus, departments of public works—Gentlemen: You will please notify the employees of your bureau that all debts contracted by them since entering the employ of the city must be paid, and that any employee refusing to pay his honest debts must leave the service of the city."



## FIRE AND POLICE.

Galveston, Tex., has no city jail. The sheriff keeps and feeds city prisoners for fifty cents a day.

The police force at Lima, O., consisting of fifteen men, has been thoroughly reorganized. New uniforms and light colored helmets have given the men what is termed the "metropolitan" appearance. Chief Frank M. Bell says all of his men have joined the Y. M. C. A., and take advantage of the training opportunities offered by the gymnasium.

Eight hundred new men have just been added to the New York police force.

The police chiefs of Indiana held their annual meeting at Indianapolis, on Aug. 18. There was a general discussion of police work, and the interchange of ideas proved profitable to all in attendance. C. O. Meagher, of Terre Haute, presided. Officers of the association for the ensuing year were elected as follows: Thomas Colbert, of Indianapolis, president, and W. H. Fortner, of Muncie, secretary.

At a recent meeting of the New York board of aldermen it was resolved that "Little Giant" fire extinguishers be placed in all public buildings as an additional safeguard against the loss of life and property by fire. The "Little Giant" is the invention of Walton R. Johnston, late surveyor of combustibles, New York fire department.

R. J. Tilford, D. E. O'Sullivan, and Chas. E. Wilson, composing the board of public safety at Louisville, have been impeached by the council and Mayor Todd has appointed George Crawford, John Searey and William Evans as their successors. The new board has removed Chief of Police Taylor and appointed R. M. Cunningham in his place.

At Springfield, O., the police department maintains what is called a suburban service wagon. It looks like a surry and is fitted up to use as an ambulance or to convey officers to distant points where their services may be needed. Chief Van Tassell says it is an excellent thing.

The police force at the rapidly growing city of Cripple Creek, Colo., consists of a chief, a captain, a jailor and eight patrolmen. The chief gets \$150 a month, the captain \$100, and the patrolmen \$75 each.

Binghamton has one of the most efficient police forces in the state of New York. The patrolmen are paid \$60 a month for the first five years, and get an increase of \$5 per month every five years. This system is an incentive to faithful and long service. Charles H. Meade, the chief of the department, is a gentleman of rare ability.

A newspaper reporter at Wichita, Kan., took an early morning ride on a hose wagon and then had a spasm of about a thousand words, ending like this: "Talk about a bicycle ride before breakfast. A ride on the hose wagon at 5 o'clock in the morning, especially when it is drawn by those big gray horses, is the most exhilarating thing in the world. It is absolutely intoxicating to go tearing up Market street for nearly a mile soothed and excited by the alterations of the rhythmic melody of beating hoofs and clanging gongs. If you don't believe it just try it."

More than thirty-five years have passed since the Metropolitan Police Department of St. Louis was organized. Of the 300 men who were sworn in at that time, June 1, 1861, only three still remain in the service. One of these is Major Laurence Harrigan, the present chief, who was made a sergeant when the force was organized, but soon enlisted in the Confederate Army, where he attained the rank and title of Major. After returning to the walks of civil life he rejoined the police force, and at three different times has been made chief. His record as an officer is known to everybody. He has been called "the finest policeman in the United States," and his name is as familiar to thousands in New York and other large cities as it is in St. Louis. Practically, his whole life has been spent as a member of the St. Louis Police Department, and he has watched it grow from a membership of 300 to nearly 800, while the districts have increased from three to eight.—St. Louis Post-Dispatch.

The twenty-three supernumeraries of the Atlanta, Ga., police force have been suspended until fall, on special order by Chief Connolly. The police department fund is getting low, and the supernumeraries were left out simply for the purpose of economizing.

The retirement of James E. Tryon as secretary and superintendent of water, of the Detroit fire department, a position he has held for twenty years, brought out from the fire commission very complimentary resolutions of regret. He planned the pipe line system now used in fighting fires in Detroit.

## PUBLIC IMPROVEMENTS.

Detroit has let a contract, at \$1.50 a yard, for resurfacing a lot of worn-out asphalt, the original paving contractor being sick and financially unable to carry out his agreement to keep the pavement in good condition. The repairs will cost \$10,000, and the city will sue the contractor and his bondsmen, who are some of the most prominent citizens.

The business streets of Beloit, Wis., are to be paved with brick. A. E. Rutledge, of Rockford, Ill., has the contract.

It costs nearly \$1,000 per day to keep the 400 miles of streets of Pittsburg clean and the 210 miles of sewers in good condition. The city is divided into six districts, each presided over by an assistant superintendent of highways and sewers, who is held responsible for its condition. Four hundred and fifty men, 90 horses and 23 sweeping machines are employed. Most of the work is done at night.

Brick paving, with Berea curbing, is to be laid on Court and Union streets, Athens, O. The contract has been let at figures which will make the improvement cost about \$1.05 per front foot.

Pavements made of granulated cork, mixed with asphalt, have proved successful after two years' trial in London and Vienna. They are never slippery, are odorless, and do not absorb moisture, besides being clean, elastic and lasting. Near the Great Eastern station in London, the wear in two years amounts to about one-eighth of an inch.

The contract for the construction of a complete sewer system at Champaign, Ill., at a cost of \$42,747, has been awarded.

The contract for paving Second street, Milwaukee, with granite blocks on a concrete foundation, has been let to William Forrestal at \$2.53 a square yard. At the same time contracts were let for Menomonee Falls limestone paving on Park street at \$1.32 a square yard, and for cedar block paving on Ogden avenue, at 98 cents a square yard.

The Barber Asphalt Paving Company has refused to comply with the resolution of the Denver board of public works directing them to repair Fifteenth, Sixteenth and Larimer streets. The asphalt people claim that they are not responsible for damages to the pavement caused by the action of steam and gas, and that their five-year guarantee only covers ordinary wear and tear and defective work.

An ordinance providing for the paving of Washington street, Portland, Ore., with asphalt has passed the council.

Marion Hearshman, of Des Moines, Ia., has invented a catch basin for sewers which is said to be the finest thing of the kind extant. The basin catches all of the debris and does not let it go into the sewer; horses do not slip on the basin and bicycles can be ridden over it. The city of Des Moines is giving this new invention a trial.

Stone paving contractors who do work in Cleveland will now have to guarantee their pavement for five years. The city council has so decreed. Since the first of the year they have been giving a three-year guarantee, and previous to that one for two years only.

Bids were opened by the Cleveland board of control recently for the paving with asphalt of two streets in the East End. Three proposals were received, one each from the Warren-Scharf Company, the Ohio Bermudez Company, and M. F. Bramley, a Cleveland contractor. The proposals all centred around the \$3.25 per square yard mark, and were so nearly alike in every essential respect that they were all rejected by the board, which has re-advertised for bids.

At Detroit, an ordinance has been adopted forbidding the sweeping of dirt or rubbish from the sidewalk into the gutter, except between the hours of 6 and 11 p. m., on all streets that are cleaned by the flushing system.

An entire new system of sewers is contemplated at Terre Haute, Ind.

Des Moines, Ia., recently contracted for 89,340 square yards of brick paving on concrete foundation. The prices ranged from \$1.36½ to \$1.44 a square yard.

Brick paving, on sand foundation, is being laid on Eleventh street, Topeka, Kan., at \$1.17 per square yard.

Cedar block paving, on plank and sand, is being laid on three streets at Fargo, N. Dak., at 99 cents per square yard.

Douglass street, Sioux City, Ia., will be paved with asphalt on a six-inch concrete foundation. West Seventh street, in the same city, will be paved with brick on six inches of concrete.

Specifications are being prepared for the paving, with asphalt, of Fourth and Ohio streets, Terre Haute, Ind. On Ohio street three feet on each side of the roadway will be paved with brick.

#### PAVING WORK AT NEWARK.

THE FOLLOWING PAVING WORK IS UNDER WAY AT NEWARK AND WILL BE COMPLETED BEFORE DECEMBER 1.

NAME OF STREET.	EXTENT OF WORK.	MATERIAL. (BRIEF SPECIFICATION.)	CONTRACT PRICE. (PER SQ. YD.)
South Sixth Street.....	14,000 Square Yards.	Trinidad Lake Asphalt, 5-in. Concrete, 1½-in. Binder, 2-in. Asphalt.	\$2 53
Crane Street.....	2,700 " "	" " " 6-in. " 1½-in. " 2-in. "	2 58
Barclay Street.....	11,700 " "	" " " 5-in. " 1½-in. " 2-in. "	2 52
William Street.....	3,100 " "	" " " 6-in. " 1½-in. " 2-in. "	2 60
Summit Street.....	1,800 " "	" " " 5-in. " 1½-in. " 2-in. "	2 64
Waverly Place.....	3,200 " "	" " " 5-in. " 1½-in. " 2-in. "	2 52
Monmouth Street.....	8,500 " "	" " " 6-in. " 1½-in. " 2-in. "	2 60
Halsey Street.....	17,000 " "	" " " 6-in. " 1½-in. " 2-in. "	2 59
Elizabeth Avenue....	12,000 " "	" " " 6-in. " 1½-in. " 2-in. "	2 47
Nursery Street.....	1,900 " "	" " " 5-in. " 1½-in. " 2-in. "	2 50
Wakeman Avenue.....	6,000 " "	" " " 5-in. " 1½-in. " 2-in. "	2 50
North Sixth Street.....	9,000 " "	" " " 6-in. " 1½-in. " 2-in. "	2 55
Lincoln Park.....	3,500 " "	" " " 6-in. " 1½-in. " 2-in. "	2 57
Astor Street.....	1,800 " "	" " " 6-in. " 1½-in. " 2-in. "	2 59
Pennsylvania Avenue...	11,700 " "	" " " 6-in. " 1½-in. " 2-in. "	2 60
Walnut Street.....	5,900 " "	" " " 6-in. " 1½-in. " 2-in. "	2 59
Bank Street.....	3,250 " "	" " " 6-in. " 1½-in. " 2-in. "	2 59
South Eighth Street.....	16,000 " "	" " " 6-in. " 1½-in. " 2-in. "	2 64½
Eagles Street.....	2,300 " "	" " " 6-in. " 1½-in. " 2-in. "	2 67
Cedar Street.....	1,200 " "	" " " 6-in. " 1½-in. " 2-in. "	2 67
Springfield Avenue.....	24,800 " "	Oblong Granite, on 6-in. Concrete.....	2 18
Green Street.....	2,300 " "	" " " Sand.....	1 59
Pioneer Street.....	3,400 " "	" " " ".....	1 68
Sanford Street.....	1,800 " "	" " " ".....	1 68
Merchant Street.....	1,800 " "	" " " ".....	1 68
High Street.....	7,600 " "	" " " ".....	1 85
Taylor Street.....	3,800 " "	" " " ".....	1 82
Seventh Avenue.....	9,700 " "	" " " ".....	1 85
Fifteenth Avenue.....	13,500 " "	" " " ".....	2 12
Belmont Avenue.....	24,500 " "	" " " ".....	2 09
Mt. Prospect Place.....	3,000 " "	Brick, on 6-in. Concrete (Mack Fire Clay).....	2 15
Webster Street.....	4,600 " "	" 6-in. " ( do do ).....	2 13
Johnson Avenue.....	3,700 " "	" 6-in. " (Mack Block).....	2 29
Astor Street.....	3,500 " "	" 6-in. " (Catskill Brick).....	2 19
Linden Street.....	1,000 " "	" 6-in. " ( do do ).....	2 03
Roseville Avenue.....	20,000 " "	" 6-in. " (Mack Fire Clay).....	2 15



Contracts were recently let at Terre Haute, Ind., for paving a number of alleys with brick on edge, on five inches of concrete and two inches of sand. The prices ranged from \$1.41 to \$1.55 per square yard.

Contracts have recently been let at Buffalo for paving as follows: Baxter street, 3,681 square yards, \$9,533; Gurnsey street, 2,290 square yards, \$5,429; Norman street, 2,334 square yards, \$6,044; Red Jacket street, 1,938 square yards, \$4,980; Swett street, 4,914 square yards, \$11,589. All of this paving is to be of asphalt with six inches of concrete, 1½-inch binder course and 2-inch surface.

The contract for 26,440 square yards of asphalt paving on six-inch concrete foundation, on Fourth street, Sioux City, Ia., has been awarded to the Warren-Scharf Company at \$2.39 a square yard.

St. Louis will soon ask for bids on the construction of about forty miles of sewers.

On Sept. 11 bids will be opened for the following paving at Buffalo: South Division street, 3,235 square yards; Seneca place, 404 square yards; Troupe street, 3,021 square yards; Plymouth avenue, 730 square yards; Rano street, 2,780 square yards; Station alley, 220 square yards. Bids for asphalt, stone and brick will be received and reported to the common council, who will determine the kind of pavement to be used.

A lift bridge, to cost \$86,700, is being constructed over the Buffalo River at Buffalo.

Contracts for paving in St. Louis have been awarded as follows: Granite blocks on eight inches of concrete—Nineteenth street, 5,522 square yards, at \$2.26 a yard; Vandeventer street, 9,163 square yards at \$2.10; Eighteenth street, 2,233 square yards, at \$2.34. Vitrified brick on six inches of concrete—Euclid avenue, 13,585 square yards at \$1.44; Page boulevard, 20,625 square yards at \$1.45; Delmar boulevard, 11,220 square yards, at \$1.54; Sarah street, 8,976 square yards at \$1.51; Washington street, 12,716 square yards at \$1.43; Duncan avenue, 3,509 square yards at \$1.31.

Public works contemplated at Philadelphia include the construction of main sewers to cost \$300,000, branch sewers, \$50,000; new bridges, \$600,000; dredging Delaware River, \$500,000; widening Delaware avenue, building bulkhead and extending four piers, \$1,500,000; abolishing grade crossings, \$900,000.

St. Louis will advertise for bids on a great deal of paving work within a few months. Asphalt, brick and granite will be used.

A. H. Jackson, acting city engineer of Wichita, Kan., writes: "We have no public improvements of any nature either under way or contemplated. Under these 'good old democratic times' we have all we can do to stay alive."

Reports from southern cities show very little public work under way or in contemplation.

#### PAVING AT PORTLAND, OREGON.

Trinidad asphalt and wood blocks are the principal materials being used for improving streets in Portland, Oregon, with vitrified brick coming to the front. Nearly five years ago several of the principal streets were paved with bituminous rock on a six-inch concrete foundation, the contractor agreeing to keep the pavement in repair

and turn it over to the city in good repair at the end of five years. The pavement proved practically worthless, wearing out in places before a year had passed, and before three years had passed the contractor gave up all pretence of trying to keep the pavement in repair. So it happened that for about two years the principal streets in the city have been the worst. Now the bituminous rock is being replaced with Trinidad asphalt, which has given good satisfaction on other streets.

Fourth street is being paved with wood blocks on a concrete foundation most of the way, but some half dozen blocks at the end are being laid on a foundation of crushed rock well rolled and packed. The blocks are five inches in height, of best yellow fir, butt cuts, the lumber being planed before being cut into blocks to make them all of the same thickness. They are set as closely together as possible, and the interstices are filled with melted asphalt.

Two companies in Portland are now making excellent vitrified brick, and a contract has been let for paving part of a street with this material. Three blocks of basalt have gone out of favor, although they show no signs of wear after ten years' use. They make a rough, noisy street and are being discarded. Thousands of blocks which cost five cents each cannot be given away.

#### CLEVELAND'S BIG IMPROVEMENTS.

Preparations for the great public improvements in the completion of which Cleveland will expend between \$5,000,000 and \$7,000,000 are being pushed forward rapidly. Meetings of the city executive commissioners, which act as advisory boards, with Mayor McKisson, are being held regularly. The garbage disposal commission has already adopted plans and specifications for a plant, and the city council has ratified them. The commission which is arranging for the widening of the Cuyahoga River is making good progress. It has been negotiating with the owners of land fronting on the river from its mouth to the government line, and transfers to the city of the property essential to the improvements will soon be made. An ordinance authorizing an issue of \$100,000 worth of bonds for the purpose has been introduced in the council.

In the meantime the latter body is making improvements on the lake front. As in Chicago, the railroad companies have built their tracks along the lake shore. The city has begun to extend Erie street into Lake Erie, and land has been made several hundred feet from shore, and piers constructed to protect it from high seas. It is planned to construct a double row of piling straight out from the extension of Erie street to a distance of 900 feet, or within 600 feet of the United States government line. Then westward from the terminus of the piling another row will be built as far as Seneca street, a distance of 2,200 feet, directly in front of the downtown business section of the city. The space of water between the shore and the latter pier will be filled in and converted into an immense park and pleasure resort. Extending from the pier will be constructed docks 600 feet out into the water. Every facility for the landing of passengers and light freight, such as passenger boats carry, will be afforded, and where the water is not of a sufficient depth to accommodate the largest vessels, the lake bottom will

be dredged. No freight boats will be allowed to land at these docks. The work of making land is being carried forward with great expedition, and the results already attained in this direction are gratifying in the extreme to the city authorities. Bonds will be issued to further and hasten the work, which will be completed within two years, it is expected.

Another project which has taken definite form is the construction of a system of intercepting sewers along the lake shore, into which the great sewer mains will deposit their sewage, instead of in the lake, as they do at present. The city council has just authorized an issue of \$110,000 worth of bonds for the construction of the west end of the interceptor.

## TAXES AND FINANCE.

For several years the Northwestern National Bank of Sioux City, Ia., has cashed all city warrants, with the understanding, however, that it would discontinue the practice if the city permitted them to run over \$10,000 a month. The warrants have been running over the limit for a number of months and now the bank will refuse to cash the warrants unless the city fathers take some step toward retrenchment. It is likely that the council will cut off a good number of city employees so as to keep the monthly warrant issue within the \$10,000 limit.

The Butte, Mont., council has reduced the salary of the assistant city treasurer from \$150 to \$100 a month.

Last year the total tax levy at Marshalltown, Ia., was 80 mills, and this year the council and the school board have combined to reduce it to 57 mills. The assessed valuation at Marshalltown must be very low, or there is something very bad in the city government to make the levy even 57 mills.

Cigarette dealers at Greensburg, Ind., will be required to pay a license of \$300 a year by the provisions of an ordinance recently passed.

The new assessment rolls at Milwaukee have been completed. The total assessed valuation of real and personal property in the city amounts to \$144,173,189.48, an increase of \$1,623,176.44 over the amount in 1895.

The tax levies of Butte, Mont., for the current year have been fixed as follows: For general purposes, 7½ mills; for fire and water purposes, 3 mills, and for public library, 1 mill. The total amount of taxable property in the city is \$14,548,370.

Marinette, Wis., has adopted what is known as the state charter. This provides for the appointment of a board of public works of three members and the election of a city comptroller. The new charter allows a 3 per cent. limit of taxation, instead of 2 per cent., as under the old charter.

The tiger at Billings, Mont., is feeling better, for the city council has not only reduced the gambling license, but made it payable monthly instead of yearly in advance. The general gambling license has been reduced from \$400 a year to \$20 a month, and the faro license from \$480 a year to \$25 a month. Provision is also made for the

fascinating and popular game of craps, the fee being placed at \$25 a month.

Tax Commissioner Kurtenacker, of La Crosse, Wis., has completed the assessment rolls for that city for 1896. The total amount of the assessment is \$12,258,393, an increase of \$21,710 over the preceding year.

The council of Terre Haute, Ind., refused to reduce the saloon license from \$250 to \$150 a year. The peddlers, who also asked for a reduced license, were likewise turned down.

The city council of Cleveland has concluded to sell no more city bonds until the presidential campaign and election is over. It was necessary recently to sell some refunding 4 per cent. viaduct bonds, and the premium was very small indeed for Cleveland. Usually the premium reduces the securities to a 3½ per cent. basis. Auditor Rossiter attributes the low bids—there were but two and nearly always heretofore there were about a half a dozen—to the free silver agitation. Cleveland will issue millions of dollars worth of bonds for public improvements within the next twelve months.

City Collector Maas, of Chicago, has pronounced the new ordinances compelling all peddlers to place on their wagons a metal sign giving the numbers of their license a failure. He said that the ordinance, instead of increasing the city's revenues, has resulted in a loss. He estimates that the ordinance has reduced the revenue by \$12,000. Under the old plan the peddlers were given certificates of license, which the police made them show. Under the new system the city collector thinks the police see the signs on the wagons and are given the impression that the peddlers have taken out the necessary licenses, although by demanding the peddlers' certificates it would in many cases be made apparent that the licenses were of the first period, which has expired. Mr. Maas had a conference with Chief of Police Badenoch in regard to the matter. The chief issued an order to his men to stop every peddler found doing business in the streets and carefully examine his license.

W. B. Seife, city auditor of Pueblo, Colo., has issued his report for the fiscal year ending March 31, 1896. The report shows that the expenditures of various departments for the year were: Water and irrigation, \$21,636; sanitary, \$4,849; library, \$2,800; lighting, \$21,356; street and bridge, \$10,601; fire, \$30,622; police, \$23,999. The total bonded indebtedness of the city is shown to be \$297,000.

In Paris a tax of ten francs is levied on every bicycle, and the revenue from that source for the past year amounted to 3,220,000 francs.

### TAXING HOSPITALS AT OSHKOSH.

It has been decided by the authorities to tax the three leading hospitals at Oshkosh, Wis. These institutions have heretofore escaped taxation on the plea of being charitable institutions, but at the same time have collected several hundred dollars yearly for the care of the city's poor. The result was a decision to place them on the tax list.

It was claimed by the management of the hospitals that the institutions came under the head of benevolent and charitable institutions, and that therefore they were exempt from taxation. Notwithstanding this assertion bills



have been constantly presented to the city for the care of the sick poor of the city, who were taken to the hospital for treatment. The argument advanced by those favoring taxation of the hospitals was that their caste as religious or benevolent institutions was lost when payment was demanded. Comptroller Lampert has insisted and still continues to insist that the taxation of such institutions under the circumstances is the only correct thing to do.

#### CHICAGO JUDGMENTS ARE UNCERTAIN.

The accumulation of judgment debts against the city of Chicago affords an object lesson for other municipalities which is well worth studying. On Jan. 1, 1896, the judgment account of the city of Chicago was:

Judgments rendered in circuit court.....	\$681,167.48
Judgments rendered in superior court....	456,008.80
Judgments rendered in appellate court....	8,284.94
Judgments rendered in U. S. district court	10,496.80
Judgments rendered in justice court .....	54.08

Total judgments and costs .....	\$1,155,922.10
Interest and costs .....	117,055.21

Grand total .....	\$1,272,977.31
Appropriated by common council this spring to meet judgments .....	400,074.00
Of which amount there was paid to gas companies through mandamus proceedings .....	300,000.00
Paid to holders of other judgments.....	100,074.00
Still due on total of judgments on Jan. 1..	872,903.31

To this balance due is to be added judgments which have accumulated since Jan. 1 and the interest at 5%. The interest on time warrants is 6%. There is a specific time fixed for the payment of the time warrant. There is no time fixed for the payment of the judgment, but the interest on the latter is less. There are judgments against the city which have been running since 1888.

The system generally employed in meeting these judgments is this: Annually the comptroller furnishes the council and the finance committee with a list of all the judgments rendered. In preparing the council appropriation bill the finance committee sets aside for the payment of the judgment such money as it thinks can be spared. When the tax levy is prepared the chairman of the finance committee, with his associates, designates which judgments shall be paid off in that particular year. A man who has a judgment against the city and has a friend on the finance committee may, by bringing sufficient pressure, induce that friend to put his name on the payable list. A man who has no friend on the committee or in the council may fail to have his judgment paid. There is no law compelling the finance committee to follow any particular plan in paying judgments.

It has been the policy of the present chairman of the finance committee, Alderman Madden, to pay off the small judgments first. He has done so wherever mandamus proceedings in the courts have not compelled the city to pay at once, whether it wished to or not. In the case of the \$300,000 of gas company bills this year mandamus proceedings compelled their payment.

Judgments against the city are selling as low as 82 cents. Some have been disposed of at 85 cents and some at 90 cents, but not many at the last figure. The holder of a \$10,000 judgment against the city is forced to sell it to an outside party. He is offered 82 cents for it.

The transaction then is as follows:

A \$10,000 judgment sold for 82 cents brings....	\$8,200
Loss to judgment holder on face value.....	1,800
Judgment bears 5% interest, and is not paid until the end of 5 years; loss in interest.....	2,500
City is compelled to pay the face of the judgment and the 5 years' interest; total.....	12,500

The final purchaser of the judgment finds that it is not strictly "negotiable" paper. There is no specified time for its payment. Having held it a year he is suddenly pressed for money. He may sell it for 60 cents—at a sacrifice. Whichever way he handles it he is a loser. In the end the city and the taxpayer back of the city foots the bill.

Of a situation of this character Comptroller Wetherell says: "The wrong of having these judgments outstanding and of giving men an opportunity to speculate at the expense of the city is directly traceable to our present revenue system—our method of raising money, clumsy and obsolete. Had the city sufficient revenue to meet every current bill the judgment would cease to exist and a great expense be removed from the city. We cannot continue in this way. If we do we shall get into a rut that will end in serious trouble.

"Independent of the judgments I issued last year \$1,200,000 time warrants. We have now paid all of those out of the present tax levy but about \$60,000 worth. We have also paid 6% interest on these warrants.

"This year we are compelled to again issue time warrants against the next tax levy, and, so far as I can estimate now, we will be \$500,000 more in debt at the end of this year than we were last. Under this system this indebtedness will go on increasing year after year, unless we radically revise our revenue laws. You can imagine what the end will be."

#### BIG INCREASE IN TAXES.

The amount of taxes received from all sources in the city of Washington, D. C., during the year ending June 30, 1896, is \$2,834,687.01. This is shown by the statement, issued a few days ago, by Col. F. G. Davis, Collector of Taxes for the District of Columbia.

The statement shows an increase in the gross amount over that of the preceding fiscal year of \$515,632.39, but this enormous increase in one year includes a sum of \$65,740.47, the amount of a judgment obtained by the District against the Metropolitan Railway Company, which was paid in full by the defendant company during the last fiscal year. Deducting the amount of the judgment, the city's receipts show a net increase in taxes over the previous year of the immense sum of \$449,891.92, from the regular source of revenue.

The statement of Col. Davis shows the main sources of revenue from which the aggregate was drawn, as follows: Collected in taxes on realty, \$2,756,573.81; personalty, \$156,848.65; penalties, \$68,925.59; miscellaneous, \$564,388.77; water fund, \$287,950.79, which, to-

gether with the amount of the judgment mentioned, make the grand total of \$3,834,687.01.

The population of the City of Washington is nearly 300,000. It is one of the best-governed cities, and certainly, for a city of that size, the cleanest and most picturesque, from a purely municipal point of view, in this or any other country.

## LIGHT AND WATER.

Niagara Falls, N. Y., has two water plants, one owned by the city and the other by a private corporation. The municipal plant, which supplies the northern end of the city, is not capable of providing pure and wholesome water, such as is supplied by the private plant in the other end of town. Consequently there is public agitation and a special committee of the council has been appointed to investigate the question. One way to obviate the trouble would be to install a filter plant in connection with the municipal works, but this is considered rather expensive. The private corporation has made three propositions to the city, and the acceptance of either would solve the problem. The first proposition is to sell the private works to the city for \$308,000, the second is to buy the city plant by assuming its bonded debt of \$207,000, the third is to supply the city plant with filtered water in the amount now being pumped for \$8,000 per annum. The propositions are being considered by the special council committee, who invite the citizens to express their opinions.

The city of Benton Harbor, Mich., has made a one-year contract with the Benton Harbor and St. Joseph Electric Light Company, to furnish arc lamps for street lighting at \$88 each per year.

Health Commissioner Kempster, of Milwaukee, has informed the council that the city water supply is not pure and healthy. He says if a well were as contaminated as the water in the part of the lake from which this city is supplied, it would be condemned and closed at once. The health commissioner blames the Wisconsin Rendering Company, the concern which has the contract to burn the garbage of the city, for this state of affairs. The company's plant is at Mequon, thirteen miles north on the lake shore. It is claimed it does not burn all the garbage, but dumps a considerable amount into the lake. Dr. Kempster claims that with such a contaminated water supply there is every probability of an outbreak of typhoid. The council will take steps at once to compel the rendering company to burn all the garbage and to purify the water supply.

The South Bend (Ind.) water-works will be improved by the erection of a galvanized tower, 83 feet high, surmounted by a tank that will hold 32,200 gallons. The contract for this work has been let to the Flint-Welling Manufacturing Company, of Kendallville, Ind., at \$1,794.

Mayor MacVicar, of Des Moines, Ia., is securing estimates on the cost of an electric lighting plant. It has not been determined to establish a municipal plant at Des Moines, but the council has authorized the mayor to

investigate the question. Des Moines now pays about \$52,500 a year for its public lighting. For this amount the city gets 167 arc lights, moonlight schedule, 121 arc lights on all-night schedule, 938 gasoline lamps, 17 incandescent lamps, 318 gas lamps, also gas for city hall, etc.

H. Massey Rhind, of New York, has been engaged to design the twelve public drinking fountains to be erected at Galveston, Tex. The fountains will cost \$30,000, which amount was bequeathed to the city for the purpose by the late Henry Rosenberg.

By a large majority, the voters of Joliet have rejected the proposition to pledge the surplus earnings of the water-works toward securing a larger and purer supply.

The Detroit water board has received advice from eminent attorneys to the effect that the street railway company may be compelled to pay damages to water pipes caused by electrolysis.

The Detroit water board has adopted the following rates for water used in the construction of buildings: Per 1,000 brick, 5 cents to 2 cents; per perch of stone, 1½ cents to ½-cent.; per hundred yards of plastering, 10 cents to 5 cents. The minimum rate is 50 cents a job.

The city of New Orleans pays about \$100,000 a year to the water company, and the council is agitated over the matter. Some of the aldermen are of the opinion that \$60 a year is too much to pay for a water plug. The water company at New Orleans is capitalized at \$2,000,000, but when the works were purchased from the city some years ago, the valuation was \$800,000. It looks like a case of water all around.

### PHILADELPHIA WATER REPORT.

The annual report of the Philadelphia bureau of water for 1895 is out. It shows that the amount of water pumped from the Schuylkill River during the twelve months was 73,106,159,093 gallons, being an increase of 5,947,952,754 over that of the preceding year. From the Delaware River 4,712,854,517 gallons were pumped, an increase of 433,717,968 over the preceding year. Adding the amount from small auxiliary sources of supply the grand total was 78,775,849,104, an increase of 6,702,124,766 over that of 1894.

The rapid increase in the consumption of water is shown by a table giving the figures during the past ten years. In 1886, when the population of the city was estimated at 975,000, the number of gallons pumped was 28,658,966,569, as compared with 78,775,849,104 pumped for a population of 1,329,957 last year. The gallons consumed per capita per day in the ten years were as follows: 1886, 80 gallons; 1887, 89; 1888, 100; 1889, 110; 1890, 131; 1891, 140; 1892, 143; 1893, 150; 1894, 159, and 1895, 162. A comparison is made with the consumption in other cities, and the following figures are quoted:

Daily per capita consumption in Buffalo, 252 gallons; Wilkesbarre, 240; Pittsburg, 233; Allegheny, 224; Camden, 220; Philadelphia, 162; Albany, 148; Chicago, 145; Cincinnati, 129; Baltimore, 100; Boston, 99; New York, 95; St. Louis, 79; Providence, 60; St. Paul, 50; Atlanta, 35; New Orleans, 31.

In urging the universal introduction of the system of meters the chief of the bureau has the following to say:



"There is a widespread impression that the use of water meters tends to restrict unduly the use of water, particularly on the part of the poorer members of our population, who might, under a meter system, be tempted to restrict their consumption below that which is required to maintain the public health. It would, of course, be most unwise to adopt any measure which might lead to such restriction, but other cities have overcome this difficulty by fixing a minimum rate, below which nothing can be gained by economizing."

The report shows that in 1894 198,609 dwellings were supplied with water, and in 1895 there were 205,213, an increase of 6,604. The number of dwellings without water was 12,742 in 1894, and 12,579 in 1895, a decrease of 163. The number of meters in use was 1,253, an increase of 58 over 1894.

#### INDIANAPOLIS WANTS FILTRATION.

Indianapolis is now agitating the question of an improved water supply. It wants it through a system of filtration. Some weeks ago the levee of a strawboard works at Noblesville, twenty miles above the city, on White River, gave way, and stored sludge in forty-three acres, estimated at 200,000,000 gallons, emptied into the river. Fish were killed by the thousand, and the stench of their decaying bodies became an offense along the river for thirty miles or more. The first intimation the citizens of Indianapolis had of the disaster came from the dead fish, and from the alkali in the city water. The water company's plant is on the banks of the river above the city. A deep gallery dug down to the first water supply immediately adjoining the river bank, is the reservoir from which the company draws its supply for the city. In this gallery driven wells are sunk, and a considerable supply of cold, deep well water is thus secured. Connecting with this gallery is a flume through which water can be taken directly from the river. This is for emergencies, and has been used as occasion demanded. Before passing into the flume, the water is filtered through stones and gravel, but this filter cannot be renewed, and is not satisfactory. The city board of health has reported that there are nitrates in the water, and, according to the terms of the contract with the water company, has demanded that the supply be improved and made good and potable. The secretary of the city board of health and the secretary of the state board of health have been making investigations, and have reported that the water supply can be made absolutely pure and acceptable by the use of sand filters. These filters are to be twelve acres in area and will be arranged so that part of them may be cleaned while the others are in use. The company has had experts examining the filter question and the water supply, and professes a willingness to do all that is necessary to obtain unlimited and potable water. There has been some talk of mechanical filters, but the company has not avowed an intention to use them. The expense of the proposed sand filters is estimated at \$150,000.

By the terms of the company's charter from the city, it will be possible for Indianapolis at the end of the current year to acquire the water plant. Provision is made for municipal ownership, the purchase price to be agreed upon by referees. The company's plant is estimated to

be worth \$2,500,000. The city is limited by the constitution to an indebtedness of two per cent. and only about a half a million dollars could be raised without exceeding this limit; but it is thought that the city may finance the project if it sets its head to it.

## SCHOOLS AND LIBRARIES.

There has been lots of trouble with the steam-heated schools of Detroit. Fourteen school houses must have repairs to their heating systems this summer, ranging from \$150 to \$300. The school board has adopted the plan of referring the heating and ventilating systems of new schools to Gilbert Wilkes, an expert, who is kept under salary as consulting engineer.

The finance committee of the Milwaukee council has considered the report of the school board of the sum deemed necessary for the maintenance of the public schools of the city for the year 1897. The requisition of the school board was for \$695,560, as follows:

For salaries of teachers .....	\$564,800
For salaries of janitors.....	38,000
For evening schools.....	4,000
For fuel.....	42,000
For office salaries.....	12,760
For supplies and printing .....	21,000
For water tax.....	7,000
For sundry purposes and contingencies .....	6,000

The committee decided to reduce this estimate to \$650,000. Of this sum \$220,000 will be received from the apportionment of the state and county tax for school purposes, leaving \$430,000 to be raised in the tax levy for 1896. This will be an increase of \$70,000 over the amount levied for school purposes in the tax roll of 1895 and collected this year. The additional amount required is on account of the increase in the number of the public schools, each requiring a force of teachers, and the supplies that are essential for the work of education. No part of the fund is expended for the construction of new buildings.

Ground has been broken for the new library building at Princeton University. The building will be 200 by 180 feet, four stories high, and will cost \$598,000. H. M. Potter, of New York, is the architect.

A new library building will soon be erected at Somers, Conn.

A library association has been incorporated at Waukesha, Wis., by H. A. Whitney, M. K. Hemlock, J. R. Sweeney and J. E. Smith.

Plans are being prepared for a new library building at Calumet, Mich.

The Cleveland public library is building a branch on the South Side at a cost of \$10,000. This new branch will contain 5,000 volumes at the start.

A new library building is to be erected on Market street, Poughkeepsie, N. Y.

W. H. Demers, the architect, is preparing plans for a new public library building at Troy, N. Y.

## PARKS AND BOULEVARDS.

John D. Rockefeller, the coal oil magnate, who made the nucleus of his immense fortune in Cleveland, donated to that city land worth more than \$600,000. An announcement of the gift was made on the one hundredth anniversary of the founding of the city, July 22, before an audience of 8,000 people, in the National Guard armory. A few weeks later Patrick Calhoun, a wealthy citizen of the city, gave property valued at almost \$150,000. The land will become a part of Cleveland's park and boulevard system.

Shaw's Garden, St. Louis, is to be improved by the addition of a tract of twenty acres, upon which \$30,000 will be spent for gardening and the placing of trees and plants. A glass palmhouse, to cost about \$100,000, is also contemplated.

A verdict has been returned in the North Terrace Park condemnation proceedings at Kansas City, Mo. The total valuation of the property which is to be taken for the park was fixed by the jury at \$603,113.04. This amount will be levied against the North Park district, in a special tax. The North Park district is bounded by Fifteenth street, Main and Delaware streets, the city limits on the east and the river on the north. Only the real estate in the district will be taxed, and the assessment will be payable in twenty annual installments.

Laborers in the West Side parks, Chicago, are paid \$1.50 a day and work eight hours.

Indianapolis has one of the most beautiful bicycle tracks in the country. A state law holds that bicycles are vehicles and may not use the sidewalks, and a city ordinance further requires that bells and lamps shall be used and that each wheel shall bear a license tag. The officials of wheel organizations are nominally interested in enforcing these laws, and accidents on the streets are not so numerous as formerly. To afford a straight stretch upon which wheelmen shall have their own way, under their own regulations, this new track on the picturesque and shady banks of the Indiana Central canal and White River has been completed for a distance of about five miles.

## THE PUBLIC HEALTH.

An interesting disposition of sewage is being made at the Wayne county poor farm buildings, near Detroit, Mich., the project being carried out under the Detroit board of health. The sewage first passes through a thirty-foot mixing channel, where it receives lime and alum. It then goes through three precipitating tanks, placed side by side, each  $4\frac{1}{2}$  by 75 feet, giving a total flow of 225 feet. The effluent falls four feet over a series of steps for aeration and finally discharges through an iron pipe into a small brook leading to the River Rouge.

The plant cost about \$10,000. Heretofore crude sewage has been discharged into the river, but complaints were made before court, it is said, and the practice was ordered stopped.—Philadelphia Record.

A garbage crematory will be put in at York, Pa. Bids are advertised for.

A new garbage crematory is talked of at Jacksonville, Fla. The present crematory is considered useless on account of the bad odors arising from it.

A contract has been awarded by the council for the construction of a garbage crematory at Helena, Mont., to cost \$1,698.50.

### CLEVELAND GARBAGE BIDS.

The Cleveland city council has authorized the advertisement for proposals for the construction of a garbage crematory. Bids will be received for the collection of garbage, or for its destruction; or for the collection, removal and destruction of garbage separately or collectively. Every bid is to be based upon the price per ton, and shall specifically both include and exclude the cost of the removal and disposition of night soil. In the advertisement wherever the word garbage is used, it means everything of that nature except street sweepings and night soil. It is estimated that the quantity to be handled daily will be 100 tons. Every bid must be accompanied by a complete description of the method or methods to be pursued by the bidder for carrying on the work. Daily collections will have to be made from all hotels, boarding-houses, restaurants, hospitals, grocery stores, commission houses, butcher shops, public markets, fish markets, slaughter houses, and other places within the city where animals, fowl or game are killed. During the months of May, June, July, August, September and October collections must be made three times every week from all houses within the three-mile circle from the centre of the city, and from all other places where garbage may accumulate. Outside the three-mile circle two collections daily are to be made. In the other months of the year the collections will be less frequent. The crematory and the work connected with it will be under the supervision of the director of police and the health officer. The city has authority to issue \$100,000 worth of bonds for the improvement.

### GARBAGE DISPOSAL AT PORTLAND.

Portland, Oregon, has gone through a variety of experiences in regard to the disposal of its garbage. Up to within the past ten years scavengers carted it to a dumping ground provided by the city, where it was piled and burned. As the city extended, it was found impracticable to haul garbage as far as was necessary to prevent its being an annoyance. A rude crematory was started by private parties a mile beyond the city limits; but it proved inefficient, and the distance was so great that scavengers would take every opportunity to dump their loads before reaching the crematory. Finally the city concluded to build a crematory on the shore of a slough, fourteen miles below the city, and contracted with parties to remove the garbage on scows, which were towed down to the crematory, where the garbage was consumed. The cost of this method of disposing of the garbage was \$500



per month, the city supplying the crematory free to the contractors. The plan worked well for some time and the authorities congratulated themselves that they had at last satisfactorily solved the garbage problem, but soon the crematory began to give out in one place and then in another and there were constant bills for repairs. The crematory was an experimental affair devised by a local contractor, and while it burned the garbage very well, it could not withstand the wear and tear. Some three months ago the contract for disposing of the garbage expired, and the best bid which could be obtained for its renewal was \$800 per month. The new council consider this excessive and have been considering the question of building a new crematory within the city limits, one of the odorless kind, claiming the amount saved by having the crematory where the scavengers can haul the garbage directly to it will soon pay for the structure.

It is quite certain that there will be energetic remonstrance from any part of the city in which it may be proposed to locate the crematory, and in the meantime, in order to have leisure to consider the matter, the council have let a contract for removing garbage for six months at \$800 per month.

#### UNSATISFACTORY GARBAGE DISPOSITION.

Months ago the Commissioners of the District of Columbia prepared specifications and regulations to govern the collection and destruction of the garbage of the city of Washington. Among other things two crematories were provided for, one to be selected by the contractor, with the approval of the Commissioners; the other to be selected by the Commissioners. They were to be located in different parts of the city, in order that the garbage could be readily disposed of and the nuisance of foul-smelling carts wending their laborious way through the city reduced to a minimum.

The garbage contractor protested against the Commissioners selecting a crematory, and finally won the fight. The result was the erection of a small crematory at the foot of South Capitol street, where a portion of the daily output of the city's garbage is cremated. All that the crematory cannot take charge of (and it is a big pile) is loaded upon scows at the foot of G street and taken down the river. What becomes of it is a matter of conjecture. According to the contractor, the garbage is sold to farmers, who spread it upon their land for fertilizer. According to the river men, the garbage is dumped overboard, polluting the river water for miles.

#### AS OTHERS SEE US.

Enclosed please find my subscription to your paper for one year, with my sincere congratulations upon the admirable appearance of your initial number. It seems to me there is ample room for such a publication as City Government and I predict for it unquestionable success. I am very much interested in matters municipal, and believe that the inception of such publications as your own must augur well for the future conduct, upon better business principles, of American municipalities.—Mark S. Hubbell, City Clerk, Buffalo.

City Government, a monthly devoted to the practical

affairs of municipalities, makes its appearance this month. The paper is published by the City Government Company, of which B. F. Gilkison is president, and it is edited by H. J. Gonden. The New York office is at No. 150 Nassau street, the Chicago office being at No. 825 Monadnock block.

The issue of City Government now in hand includes a great many half-tone portraits of city officials. The reading matter appears to be well handled, and no doubt the publication will be successful. It is Mr. Gilkison's intention to secure for City Government the same high standing among city officials that "The Fourth Estate" occupies among newspaper men and advertisers.—The Fourth Estate.

The magazine "City Government" is calculated to do much good for the cause of municipal regeneration.—St. Louis "Post-Dispatch."

City Government is a new monthly magazine devoted to the practical affairs of municipalities, and designed particularly for the edification of city officials who desire to know what is being done by the authorities of other cities to further the interests of the people. It also aims to afford opportunity for the exchange of experience and knowledge among city officials. The initial number certainly promises well. It contains an account of the changes inaugurated by Colonel Waring in street-cleaning methods in New York; also an article on three-cent fares in Detroit, by A. D. B. Van Zandt. William H. Eustis, ex-mayor of Minneapolis, writes of "What a Mayor Can Do," which embodies the results in diminishing crime apparent in that city from restriction of the liquor traffic. There seems to be a place for such a periodical as City Government aspires to fill, and it should meet with recognition and support among city officials and citizens who are interested in good government.—Detroit "Free Press."

Please enter my name for subscription for City Government. I like the appearance of the sample copy which you sent me, and believe that it will be of great value to parties interested in city government.—John MacVicar, Mayor of Des Moines.

I have the honor to acknowledge receipt of No. 1, Vol. I., of City Government. If the succeeding numbers are as full of good, sensible reading matter for city officials as the first is, I shall not regret having subscribed for the magazine.—H. A. Gorsline, Supt. of Police, Fort Wayne.

I am highly pleased with your magazine, and wish you great success.—Phil. W. Schweitzer, Chief of Detectives, St. Paul.

I want to congratulate the publishers of City Government on its first issue, and wish it every success. I am indeed pleased with it, and think it should find its way, without solicitation, into every city clerk's office in the land, if not into every public office.—S. F. Arkush, City Clerk, Niagara Falls.

To city officials, good citizens and taxpayers, City Government is a magazine of constant interest and value.—Ottawa (Ill.) "Free Trader."

## STATISTICS OF FIRE DEPARTMENTS.

The following tables show the strength, annual expenses, monthly payrolls, salary schedules, and equipment of paid fire departments in thirty-six cities.

CITIES.	Estimated Population.	Area in Sq. M.	Total No. of Men in Dept.	Approximate Annual Cost of Department.	Average Monthly Pay Roll.
New York.....	1,906,000	64	1,160	\$2,345,355	\$142,000
Chicago.....	1,750,000	189	1,115	1,542,596	122,000
St. Louis.....	604,000	61	463	750,000	43,000
Baltimore.....	540,000	31 <sup>1</sup> / <sub>2</sub>	340	421,057	25,675
Boston.....	495,000	37	80	1,070,000	60,000
Cincinnati.....	355,000	36 <sup>1</sup> / <sub>2</sub>	319	429,850	30,500
Buffalo.....	350,000	42	389	546,277	31,000
Cleveland.....	345,000	28	379	456,484	31,000
Pittsburg.....	275,000	27 <sup>1</sup> / <sub>2</sub>	265	393,810	20,000
Detroit.....	250,000	28 <sup>1</sup> / <sub>2</sub>	355	509,654	32,250
Milwaukee.....	250,000	23	314	412,500	27,000
Minneapolis.....	195,000	53 <sup>1</sup> / <sub>2</sub>	316	349,050	24,000
Rochester.....	160,000	25	180	228,000	15,000
Providence.....	160,000	15 <sup>1</sup> / <sub>2</sub>	265	284,000	20,000
Omaha.....	160,000	24 <sup>1</sup> / <sub>2</sub>	107	90,000	7,924
Indianapolis.....	155,000	17 <sup>1</sup> / <sub>4</sub>	145	171,543	10,000
Kansas City.....	150,000	15	170	140,000	10,000
St. Paul.....	150,000	55 <sup>1</sup> / <sub>2</sub>	192	200,000	13,200
Denver.....	150,000	44 <sup>1</sup> / <sub>2</sub>	117	138,000	10,553
Toledo.....	125,000	28 <sup>1</sup> / <sub>2</sub>	102	90,000	7,000
Allegheny.....	120,000	8	105	138,319	8,211
Columbus.....	110,000	16 <sup>1</sup> / <sub>4</sub>	115	150,000	8,842
Paterson.....	100,000	8 <sup>1</sup> / <sub>4</sub>	90	118,000	8,000
Grand Rapids.....	90,000	18 <sup>1</sup> / <sub>2</sub>	114	110,000	7,500
Nashville.....	87,000	9 <sup>1</sup> / <sub>2</sub>	79	80,900	5,500
Dayton.....	85,000	14	80	68,000	4,800
Des Moines.....	75,000	54	62	55,550	3,783
Savannah.....	70,000	65	68	70,000	4,050
Lincoln.....	65,000	10	28	25,840	1,750
Peoria.....	63,000	20	50	53,000	3,300
Seattle.....	60,000	35	76	81,000	5,268
Topeka.....	40,000	9*	30	26,000	1,900
Spokane.....	36,000	20	44	46,080	3,100
Davenport.....	35,000	9	28	24,000	1,750
Sioux City.....	30,000	39	30	27,000	1,655
Macon.....	30,000	..	48	38,000	2,700

\* This includes three square miles outside of the city limits, which territory is covered by the fire department.

## EQUIPMENT OF FIRE DEPARTMENTS.

CITIES.	Fire Houses.	Steam Engines.	Chemical Engin. s.	Hook & Lad. Trks.	Hose Carriages.	Hose Wagons.	Hose Carts.	Chic-fs' Buggies.	Fuel, Tool and Supply Wagons.	Water Towers.	Fire Boats.	Combination Chemical & Hose.	Horses.	1000 Feet of Hose.	Alarm Boxes.
New York.....	85	98	5	39	1	32	8	21	102	4	3	0	415	1289	
Chicago.....	100	84	27	33	35	42	0	20	50	2	4	0	470	155	1115
St. Louis.....	34	51	4	13	37	9	0	12	16	2	0	12	226	50	768
Baltimore.....	39	25	10	14	17	19	0	7	7	1	1	0	159	64	361
Boston.....	74	51	16	22	4	48	0	18	46	2	2	3	285	85	578
Cincinnati.....	36	27	3	10	0	30	0	8	3	1	0	0	148	55	440
Buffalo.....	39	31	6	8	4	21	0	7	28	1	2	0	215	83	374
Cleveland.....	26	26	3	9	0	25	0	5	1	1	2	0	150	40	350
Pittsburg.....	27	21	5	8	21	3	0	9	5	0	0	2	141	72	387
Detroit.....	36	24	6	11	11	10	0	7	5	1	1	4	169	57	380
Milwaukee.....	24	19	6	8	0	22	0	4	19	1	2	2	156	51	334
Minneapolis.....	23	21	11	7	9	10	0	8	7	1	0	3	190	45	290
Rochester.....	18	8	2	4	0	12	2	2	1	0	0	0	80	30	196
Providence.....	22	8	3	7	0	18	0	5	22	1	0	1	90	30	283
Omaha.....	13	4	2	3	4	6	1	3	1	1	0	1	50	21	92
Indianapolis.....	18	9	3	4	0	18	0	2	2	2	0	0	72	26	179
Kansas City.....	20	13	6	7	5	10	1	5	21	1	0	0	111	42	164
St. Paul.....	11	7	3	3	1	11	0	5	1	1	0	3	60	18	147
Denver.....	11	6	3	4	3	4	0	3	12	0	0	4	54	20	256
Toledo.....	11	10	0	2	11	1	0	2	2	0	0	2	64	27	170
Allegheny.....	11	3	3	3	6	3	0	3	2	1	0	0	64	14	115
Columbus.....	14	9	1	3	0	8	1	3	1	0	0	0	45	15	113
Paterson.....	9	7	2	3	1	8	0	1	1	0	0	0	50	22	118
Grand Rapids.....	11	6	3	2	7	0	2	3	1	0	0	0	50	10	89
Nashville.....	12	4	2	3	0	13	0	3	1	0	0	0	35	25	124
Dayton.....	11	0	3	3	0	4	1	2	0	0	0	4	32	14	47
Des Moines.....	8	6	2	2	0	4	3	4	3	0	0	0	38	17	70
Savannah.....	3	3	2	2	2	1	0	1	1	1	0	0	20	9	42
Lincoln.....	7	3	2	2	3	4	0	3	0	0	0	0	28	12	140
Peoria.....	9	5	3	3	0	8	1	2	1	0	1	0	34	13	55
Seattle.....	4	1	2	1	3	2	1	1	0	0	0	0	16	6	46
Topeka.....	5	3	1	2	2	1	0	1	1	0	0	2	26	6	26
Spokane.....	7	0	0	1	3	3	0	1	1	0	0	1	16	9	50
Davenport.....	6	1	3	2	1	3	0	2	2	0	0	1	19	7	33
Sioux City.....	5	3	1	2	2	2	0	1	1	0	0	0	20	6	44
Macon.....	5	3	1	2	2	2	0	1	1	0	0	0	20	6	44

## SALARY SCHEDULES OF FIRE DEPARTMENTS.

[Monthly salaries given unless otherwise stated.]

CITIES.	Chiefs	Asst-Chief	Captains.	Lieutenants.	Engineers.	Firemen.
New York.....	\$500	\$350	\$180	\$150	\$133	\$83-\$116
Chicago.....	500	266-375	120-137	100-107	87-115	70-105
St. Louis.....	333	166	100	95	100	90
Baltimore.....	166	116	75-91	83	91	66-75
Boston.....	291	183-200	133	116	108	100
Cincinnati.....	250	166	105	93	100	90
Buffalo.....	250	183	91	79	83	75
Cleveland.....	208	141-175	95	85	95	80
Pittsburg.....	250	150	86	75	85	75
Detroit.....	250	208	96	83	96	75
Milwaukee.....	300	166-175	100	91	100	80-166
Minneapolis.....	250	116-150	82-85	72-75	80-82	70-72
Rochester.....	223	135	95	82	83	75
Providence.....	166	116-125	3 50 a day	3.15 a day	3.25 a day	2-3 a day
Omaha.....	250	150	80	75	85	50-70
Indianapolis.....	125	100	75	2.25 a day	75	2.25 a day
Kansas City.....	202	101-135	71	None	71	60
St. Paul.....	250	116-150	78-84	70-74	78-80	60-69
Denver.....	208	125	100	90	100	85
Toledo.....	187	50-125	75	None	75	60
Allegheny.....	166	100	80	75	85	75
Columbus.....	166	100	85	80	85	75
Paterson.....	150	108	83	None	81	79
Grand Rapids.....	166	100-125	76	65	83	62
Nashville.....	150	100	75	70	75	67
Dayton.....	208	100	70	None	77	66
Des Moines.....	100	66	65	60	None	60
Savannah.....	166	112	70	60	83	50-60
Lincoln.....	100	None	65-70	60	70	60
Peoria.....	116	90	70	None	None	65
Seattle.....	100	90	65	62	65	60
Topeka.....	125	75	68	60	60	60
Spokane.....	100	80	75	67	75	67
Davenport.....	95	70	65	None	None	60
Sioux City.....	100	75	60	None	None	50
Macon.....	125	70	60	None	75	50-60

## PURELY PERSONAL.

Robert T. Carothers has been elected mayor of McKeesport, Pa., by the city council. He is in the livery and coal business, and is an exceedingly popular citizen.

Mayor Pingree, of Detroit, has appointed John W. McGrath, ex-justice of the state supreme court, as a member of the water board; Colonel John Atkinson to the public lighting commission, Joseph S. Keen to the police commission, Robert Oakman as city assessor, James W. Walsh private secretary to the mayor, L. H. Beck to the poor commission, James G. Sidey building inspector, John P. Huckestein to the water board, Jeremiah Dwyer inspector of the house of correction, George H. Barbour member of the board of directors of the art museum, James T. Sterling city accountant.

George W. Riechmann has been appointed superintendent of street sprinkling at St. Louis. He has been the chief clerk of the department for many years, and his promotion has been earned by efficient service.

Superintendent Miles Humphreys, of the Pittsburg bureau of fire, will attend the twenty-fourth national convention of fire engineers in Salt Lake City. He is a vice chairman and will invite the association to meet in Pittsburg in 1897. He will go armed with an invitation from councils. If the meeting is held in Pittsburg the officials of that city will make it pleasant for all who attend.

Chief of Detectives Roger O'Mara, of Pittsburg, was hurriedly called to Denver to the bedside of his son, who went there suffering with consumption.

A. H. Leslie, the new superintendent of police at Pittsburg, has taken charge and has the duties of his office well in hand.